IMPORTANT NOTICE

NOT TO BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON.

THIS OFFERING IS AVAILABLE ONLY TO INVESTORS WHO ARE EITHER (1) QIBs (AS DEFINED BELOW) OR (2) ACQUIRING THE SHARES IN AN OFFSHORE TRANSACTION OUTSIDE OF THE UNITED STATES AND JAPAN IN ACCORDANCE WITH REGULATION S (AS DEFINED BELOW).

IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS CONTAINED IN THIS DISCLAIMER YOU SHOULD NOT READ THE ATTACHED OFFERING CIRCULAR AND SHOULD DELETE THIS ELECTRONIC TRANSMISSION.

IMPORTANT: You must read the following disclaimer before continuing. The following disclaimer applies to the attached offering circular dated June 9, 2021 (the "Offering Circular"), and you are therefore advised to read this disclaimer carefully before reading, accessing or making any other use of the attached Offering Circular. In accessing the attached Offering Circular, you agree to be bound by the following terms and conditions, including any modifications to them from time to time, each time you receive any information from us as a result of such access. If you are not the intended recipient, please notify us immediately and delete this electronic transmission and the attached Offering Circular from your system. You agree you will not forward this electronic transmission or the attached Offering Circular to any other person.

NOTHING IN THIS ELECTRONIC TRANSMISSION AND THE ATTACHED OFFERING CIRCULAR CONSTITUTES AN OFFER OF SECURITIES FOR SALE IN ANY JURISDICTION WHERE SUCH OFFER OR SALE IS UNLAWFUL. THE SECURITIES HAVE NOT BEEN, AND WILL NOT BE, REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR OTHER JURISDICTION AND THE SECURITIES MAY NOT BE OFFERED OR SOLD WITHIN THE U.S. (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT), EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE STATE OR LOCAL SECURITIES LAWS.

THE ATTACHED OFFERING CIRCULAR IS PERSONAL TO YOU, IS CONFIDENTIAL AND MAY NOT BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER. ANY FORWARDING, DISTRIBUTION OR REPRODUCTION OF THIS OFFERING CIRCULAR IN WHOLE OR IN PART IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN A VIOLATION OF THE SECURITIES ACT OR THE APPLICABLE LAWS OF OTHER JURISDICTIONS. IF YOU HAVE GAINED ACCESS TO THIS TRANSMISSION CONTRARY TO ANY OF THE FOREGOING RESTRICTIONS, YOU ARE NOT AUTHORIZED TO AND WILL NOT BE ABLE TO PURCHASE ANY OF THE SECURITIES DESCRIBED THEREIN.

Please refer to additional restrictions in the section entitled "Offering and Sale—Selling Restrictions" in the Offering Circular.

By accessing the attached Offering Circular, you will be deemed to have represented to us that you agree to comply with the restrictions set forth in this disclaimer and in the attached Offering Circular.

Confirmation of Your Representation: In order to be eligible to view the attached Offering Circular or make an investment decision with respect to the securities, investors must either be Qualified Institutional Buyers ("QIBs") (within the meaning of Rule 144A under the Securities Act) or non-U.S. persons outside the United States (within the meaning of Regulation S under the Securities Act) and Japan. You have been sent the attached Offering Circular on the basis that you have confirmed that (a) you and any customers you represent are either QIBs or non-U.S. persons outside the United States; (b) if in a member state of the European Economic Area, you are a "Qualified Investor" within the meaning of Article 2 of Regulation (EU) 2017/1129); and (c) in addition, if in the United Kingdom, you are a "Qualified Investor" within the meaning of Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 who is also (i) an investment professional as defined in Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Financial Promotion Order"), (ii) a person falling within Article 49(2)(a) to (e) ("high net worth companies, unincorporated associations, etc.") of the Financial Promotion Order, or (iii) any other person to whom the attached Offering Circular may otherwise lawfully be communicated or caused to be communicated. By accessing the attached Offering Circular, you will be deemed to have made the above representation and that you consent to delivery of such Offering Circular by electronic transmission.

You are reminded that no representation or warranty, expressed or implied, is made or given by or on behalf of the initial purchasers, nor any person who controls them nor any director, officer, employee or agent of it, or affiliate of any such person as to the accuracy, completeness or fairness of the information or opinions contained in the attached Offering Circular and such persons do not accept responsibility or liability for any such information or opinions.

The attached Offering Circular has been sent to you in an electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of electronic transmission and consequently none of the initial purchasers nor any person who controls any of them nor any director, officer, employee or agent of any of them or affiliate of any such person accepts any liability or responsibility whatsoever in respect of any difference between the attached Offering Circular distributed to you in electronic format and the hard copy version available to you on request from the initial purchasers.

You are responsible for protecting against viruses and other destructive items. Your use of the attached Offering Circular is at your own risk and it is your responsibility to take precautions to ensure that it is free from viruses and other items of a destructive nature.

OFFERING CIRCULAR **STRICTLY CONFIDENTIAL**

Renesas Electronics Corporation
Offering of 336,570,000 Shares of Common Stock

OFFER PRICE: ¥1,174 PER SHARE

This offering circular relates to a global offering of 336,570,000 shares of common stock of Renesas Electronics Corporation, a joint stock corporation incorporated with limited liability under the laws of Japan. Of the shares in the global offering, 269,256,000 shares, or the international shares, are being offered outside Japan by the international managers named herein, or the international managers, in an international offering, or the international offering. The shares to be sold in the international offering consist of 145,494,200 newly issued shares and 123,761,800 existing shares to be sold by INCJ, Ltd., or INCJ. We have granted the international managers an option to purchase up to an additional 14,549,400 newly issued shares of our common stock in connection with over-allotments, if any, in the international offering. In addition, INCJ has granted the international managers an option to purchase up to an additional 12,376,200 existing shares of our common stock in connection with over-allotments, if any, in the international offering.

Concurrently with the international offering, 67,314,000 shares, or the Japanese shares, are being offered to the public in Japan by the Japanese underwriters in a Japanese offering, or the Japanese offering, and together with the international offering, the global offering. The shares to be sold in the Japanese offering consist of 36,373,600 newly issued shares and 30,940,400 existing shares to be sold by INCJ. We have granted Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, an option to purchase up to an additional 3,637,300 newly issued shares of our common stock in connection with over-allotments, if any, in the Japanese offering. In addition, INCJ has granted Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, an option to purchase up to an additional 3,094,000 existing shares of our common stock in connection with over-allotments, if any, in the Japanese offering. See “Offering and Sale.”

The international shares are being (i) offered by the international managers in offshore transactions outside the United States and Japan in reliance on Regulation S under the U.S. Securities Act of 1933, as amended, or the U.S. Securities Act, and (ii) placed in the United States through U.S. broker dealer affiliates of the international managers to persons reasonably believed to be “qualified institutional buyers,” or QIBs, as defined in Rule 144A under the U.S. Securities Act, or Rule 144A. For a description of these and other restrictions on offers, sales and other transfers of the international shares, see “Offering and Sale” and “Transfer Restrictions.”

The offer price per share in the international offering is the same as in the Japanese offering. The closing of the international offering is conditional upon the closing of the Japanese offering, and *vice versa*.

The shares of our common stock are listed on the First Section of the Tokyo Stock Exchange, Inc., or the Tokyo Stock Exchange. The closing price on the Tokyo Stock Exchange of the shares of our common stock on June 9, 2021 was ¥1,211 per share.

Investing in the shares of our common stock involves risks that are described in the “Risk Factors” section beginning on page 18 of this offering circular.

The international shares are offered by the international managers subject to receipt and acceptance of any order by them and subject to their right to reject any such order in whole or in part. It is expected that payment for the international shares to be sold by us will be made in yen for value on or about June 15, 2021 (Tokyo time), and that payment for the international shares to be sold by INCJ will be made in yen for value on or about June 16, 2021 (Tokyo time). The international shares will be delivered through the book-entry facilities of Japan Securities Depository Center, Inc., or JASDEC, in Tokyo, on or about June 16, 2021 (Tokyo time). See “Offering and Sale” and “Clearance and Settlement of the International Shares.”

THE INTERNATIONAL SHARES HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OR THE SECURITIES LAWS OF ANY STATE OR JURISDICTION OF THE UNITED STATES AND, SUBJECT TO CERTAIN EXCEPTIONS REFERRED TO IN THIS OFFERING CIRCULAR, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES (AS DEFINED IN REGULATION S UNDER THE U.S. SECURITIES ACT). FOR A SUMMARY OF RESTRICTIONS ON RESALE AND TRANSFER OF THE INTERNATIONAL SHARES, SEE “TRANSFER RESTRICTIONS” AND “OFFERING AND SALE.”

Joint Global Coordinators

Morgan Stanley **BofA Securities** **Daiwa Securities** **J.P. Morgan**

Joint Bookrunners and Joint Lead Managers

Morgan Stanley **BofA Securities** **Daiwa Capital Markets Europe** **J.P. Morgan**

Citigroup

The date of this offering circular is June 9, 2021.

No person has been authorized in connection with the international offering to give any information or to make any representations not contained in this offering circular. If given or made, any such information or representations must not be relied upon as having been authorized by us, the selling shareholder or any of the international managers or their U.S. broker-dealer affiliates. No action has been or will be taken to permit a public offering of the shares in any jurisdiction other than Japan. This offering circular may not be distributed in any jurisdiction, except in accordance with the legal requirements applicable in that jurisdiction. Neither the delivery of this offering circular nor any offer or sale made hereunder shall, under any circumstances, create any implication that the information herein is correct as of any date subsequent to the date hereof, nor shall it constitute a representation that there has been no change or development reasonably likely to involve a material adverse change in our affairs since the date hereof. This offering circular does not constitute an offer to sell or a solicitation of an offer to buy any of the securities offered hereby by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

IN MAKING AN INVESTMENT DECISION, PROSPECTIVE INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF US AND THE TERMS OF THE INTERNATIONAL OFFERING, INCLUDING THE MERITS AND RISKS INVOLVED. THE INTERNATIONAL SHARES OFFERED HEREBY ARE NOT REQUIRED TO BE AND HAVE NOT BEEN REGISTERED WITH, RECOMMENDED BY OR APPROVED BY THE U.S. SECURITIES AND EXCHANGE COMMISSION, OR THE SEC, OR ANY OTHER FEDERAL OR STATE SECURITIES COMMISSION OR REGULATORY AUTHORITY. FURTHERMORE, THESE AUTHORITIES HAVE NOT REVIEWED THIS OFFERING CIRCULAR OR CONFIRMED THE ACCURACY OR DETERMINED THE ADEQUACY OF THIS OFFERING CIRCULAR. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE UNDER THE LAWS OF THE UNITED STATES.

This offering circular is personal to each offeree and does not constitute an offer to any other person or to the public generally to subscribe for or otherwise acquire international shares. Distribution of this offering circular to any person other than the offeree and any person purported to be retained to advise such offeree with respect thereto is unauthorized, and any disclosure of its contents without our prior written consent is prohibited. Each person receiving this offering circular acknowledges that (i) such person has not relied on any international manager, any U.S. broker-dealer affiliate of the international managers or any person affiliated with the international managers in connection with its investigation of the accuracy of such information or its investment decision and (ii) no person has been authorized to give any information or to make any representation concerning us, the selling shareholder or the international shares offered by this offering circular other than as contained herein and, if given or made, any such other information or representation should not be relied upon as having been authorized by us, the selling shareholder, or any of the international managers or their U.S. broker-dealer affiliates.

The international shares have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA, and may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of a resident in Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any applicable laws, rules, regulations and governmental guidelines of Japan.

The international shares have not been and will not be registered under the U.S. Securities Act, or with any securities authority of any state of the United States, and may not be offered or sold within the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the U.S. Securities Act and in compliance with any applicable state securities laws. The international shares are being (i) offered in the United States only to persons reasonably believed to be qualified institutional buyers, in reliance on the exemption from the registration requirements of the U.S. Securities Act provided by Rule 144A, and (ii) offered outside the United States in offshore transactions as defined in, and in accordance with, Regulation S. Prospective purchasers are hereby notified that sellers of the international shares may be relying on the exemption from the registration provisions of Section 5 of the U.S. Securities Act provided by Rule 144A. For a description of these and certain further restrictions on offers, sales and transfers of the international shares and the distribution of this offering circular, see "Transfer Restrictions" and "Offering and Sale."

In connection with the offering, the international managers are not acting for anyone other than Renesas Electronics Corporation and INCJ, and will not be responsible to anyone other than Renesas Electronics Corporation and INCJ for providing the protections afforded to their clients nor for providing advice in relation to the offering.

UK MIFIR product governance / Professional clients and eligible counterparties only target market—Solely for the purposes of the product governance requirements of Chapter 3 of the FCA Handbook Product Intervention and Product Governance Sourcebook (the "UK Product Governance Requirements") and/or any equivalent requirements elsewhere to the extent determined to be applicable, and disclaiming all and any liability, whether arising in tort, contract or otherwise, which any "manufacturer" (for the purposes of the UK Product Governance Requirements and/or any equivalent requirements elsewhere to the extent determined to be applicable) may otherwise have with respect thereto, the international shares have been subject to a product approval process, which has determined that such international shares are: (i) compatible with an end target market of only investors who meet the criteria of professional clients and eligible counterparties, each as defined in Chapter 3 of the FCA Handbook Conduct of Business Sourcebook; and (ii) eligible for distribution through all permitted distribution channels (the "Target Market Assessment"). Each distributor is responsible for undertaking its own Target Market Assessment in respect of the international shares and determining appropriate distribution channels.

MiFID II product governance—Any distributor subject to Directive 2014/65/EU (as amended, "MiFID II") (for the purposes of this paragraph, a "distributor") subsequently offering, selling or recommending the international shares is responsible for undertaking its own target market assessment in respect of the international shares and determining the appropriate distribution channels for the purposes of the MiFID II product governance rules under Commission Delegated Directive (EU) 2017/593 ("Delegated Directive"). Neither we, the selling shareholder nor any of the international managers make any representations or warranties as to a distributor's compliance with the Delegated Directive.

DISCLOSURE OF DEMAND AND ALLOCATION

Each prospective purchaser who places an order for international shares consents to the disclosure by the international managers to us and INCJ of the prospective purchaser's identity, the details of such order and the actual amount purchased, if any.

AVAILABLE INFORMATION

We have agreed that, for so long as any of the international shares are outstanding and are "restricted securities" within the meaning of Rule 144(a)(3) under the U.S. Securities Act, during any period in which we are not subject to Section 13 or 15(d) of the United States Securities Exchange Act of 1934, as amended, or the Exchange Act, nor exempt from such reporting requirements pursuant to such Rule 12g3-2(b), we will furnish, upon request, to any holder of restricted securities, or any prospective purchaser designated by a holder of restricted securities, the information required to be delivered pursuant to Rule 144A(d)(4) under the U.S. Securities Act. This undertaking is intended to be for the benefit of the holders, and the prospective purchasers designated by the holders, from time to time of restricted securities.

NOTICE TO PROSPECTIVE INVESTORS IN THE EUROPEAN ECONOMIC AREA

This offering circular has been prepared on the basis that any offer of international shares in any member state of the European Economic Area (the "EEA") (each, a "Member State"), will be made pursuant to an exemption under the Prospectus Regulation from the requirement to publish a prospectus for offers of the international shares. Accordingly, any person making or intending to make an offer in a Member State of international shares which are the subject of the offering contemplated in this offering circular may only do so to persons who are qualified investors as defined in the Prospectus Regulation, provided that no such offer of international shares shall require us, the selling shareholder or any of the international managers to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation, in each case, in relation to such offer. Neither we, the selling shareholder nor the international managers have authorized nor do we or they authorize (i) the making of any offer of international shares to any person who is not a qualified investor as defined in the Prospectus Regulation; (ii) the making of any offer of international shares through any financial intermediary, other than offers made by the international managers which constitute the final placement of international shares contemplated in this offering circular; or (iii) the making of any offer of international shares in circumstances in which an obligation arises for us, the selling shareholder or any international manager to publish a prospectus for such offer. The expression "Prospectus Regulation" means Regulation (EU) 2017/1129 (together with supplements thereto, including Commission Delegated Regulation (EU) 2019/980).

Each person in a Member State of the EEA who receives any communication in respect of, or who acquires any international shares under, the offers to the public contemplated in this offering circular, or to whom the international shares are otherwise made available, will be deemed to have represented, warranted, acknowledged and agreed to and with each international manager, the selling shareholder and the issuer that: (a) it and any person on whose behalf it acquires international shares is a qualified investor within the meaning of Article 2(e) of the Prospectus Regulation; and (b) in the case of any international shares acquired by it as a financial intermediary, as that term is used in Article 5(1) of the Prospectus Regulation, (i) the international shares acquired by it in the offer have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Member State other than qualified investors, as that term is defined in the Prospectus Regulation, or in circumstances in which the prior consent of the international managers has been given to the offer or resale; or (ii) where international shares have been acquired by it on behalf of persons in any Member State other than qualified investors, the offer of those international shares to it is not treated under the Prospectus Regulation as having been made to such persons.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED KINGDOM

This offering circular has been prepared on the basis that all offers of international shares in the United Kingdom will be made pursuant to an exemption under Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (the "UK Prospectus Regulation") and the Financial Services and Markets Act 2000 (as amended, the "FSMA") from the requirement to publish a prospectus for offers of international shares. Accordingly, any person making or intending to make any offer within the United Kingdom of international shares that are the subject of the offering contemplated in this offering circular may only do to persons who are qualified investors as defined in the UK Prospectus Regulation, provided that no such offer of international shares shall require us, the selling shareholder or any of the international managers to publish a prospectus pursuant to Article 3 of the UK Prospectus Regulation of section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation for such offer. Neither we, the selling shareholder nor the international managers have authorized, nor do we or they authorize: (i) the making of any offer of international shares to any person who is not a qualified investor as defined in the UK Prospectus Regulation; (ii) the making of any offer of international shares through any financial intermediary, other than offers made by the international managers which constitute the final placement of international shares contemplated in this offering circular; or (iii) the making of any offer of international shares in circumstances in which an obligation arises for us, the selling shareholder or any international manager to publish a prospectus for such offer.

There are restrictions on the offer and sale of the international shares in the United Kingdom. All applicable provisions of the Financial Services and Markets Act 2000 (as amended, the "FSMA"), with respect to anything done by any person in relation to the international shares in, from or otherwise involving, the United Kingdom must be complied with. See "Offering and Sale."

This offering circular is for distribution only to persons who (i) are outside the United Kingdom; (ii) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (iii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) in connection with the issue or sale of any international shares may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons" for purposes of this Notice to Investors in the United Kingdom). This offering circular is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this offering circular relates is available only to relevant persons and will be engaged in only with relevant persons.

Any person that is not a relevant person should not act or rely on the information included in this offering circular or use it as basis for taking any action. Any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons. Any person that is not a relevant person should not act or rely on this document or any of its contents.

Each person in the United Kingdom who receives any communication in respect of, or who acquires any international shares under, the offers to the public contemplated in this offering circular, or to whom the international shares are otherwise made available, will be deemed to have represented, warranted, acknowledged and agreed to and with each international manager, the selling shareholder and us that: (a) it and any person on whose behalf it acquires international shares is a qualified investor within the meaning of Article 2(e) of the UK Prospectus Regulation; and (b) in the case of any international shares acquired by it as a financial intermediary, as that term is used in Article 5(1) of the UK Prospectus Regulation, (i) the international shares acquired by it in the offer have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in the UK other than qualified investors, as that term is defined in the UK Prospectus Regulation, or in circumstances in which the prior consent of the international managers has been given to the offer or resale; or (ii) where international shares have been acquired by it on behalf of persons in the UK other than qualified investors, the offer of those international shares to it is not treated under the UK Prospectus Regulation or FSMA as having been made to such persons.

NOTICE TO PROSPECTIVE INVESTORS IN SINGAPORE

Section 309B(1) Notification—In connection with Section 309B of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), the international shares are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in Monetary Authority of Singapore Notice SFA 04-N12: Notice on the Sale of Investment Products and Monetary Authority of Singapore Notice FAA-N16: Notice on Recommendations on Investment Products).

SHORT SALE RESTRICTIONS

In connection with the global offering, we have filed an extraordinary report with the relevant authority in Japan pursuant to the FIEA. We hereby advise you that, under the FIEA and the regulations thereunder, it is unlawful for any investor who has sold short, has asked a broker for a short sale or has asked a broker to intermediate a short sale of, securities of the same class as are included in the global offering, within a specified restricted period on any financial instrument exchange (excluding off-auction (*tachiai gai*) trading on a financial instrument exchange market) or proprietary trading system in Japan, to settle the borrowing of securities with respect to such short sale with securities to be purchased by such investor in the global offering. For the purpose of this notice, the "specified restricted period" referred to above shall mean a period commencing on the day immediately after the date on which the above-mentioned extraordinary report has been filed and made publicly available, and ending at the time when any amendment thereto regarding the pricing of the global offering is filed and made publicly available; and "borrowing" shall include any purchase under any resale agreement or other similar arrangement.

Registered securities brokers in Japan (including Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., Daiwa Securities Co. Ltd., BofA Securities Japan Co., Ltd. and JPMorgan Securities Japan Co., Ltd.) are prohibited from selling securities in the global offering to any investor who intends to participate therein in order to settle the borrowing of securities with respect to any restricted short sale, as described in the paragraph above.

STABILIZATION

IN CONNECTION WITH THE INTERNATIONAL OFFERING, THE DESIGNATED INTERNATIONAL MANAGER, OR THE STABILIZING MANAGER, OR ANY OTHER PERSON ACTING FOR IT, MAY, UPON CONSULTATION WITH THE OTHER INTERNATIONAL REPRESENTATIVES, OVER-ALLOT THE INTERNATIONAL SHARES OR EFFECT TRANSACTIONS WITH A VIEW TO SUPPORTING THE MARKET PRICE OF THE INTERNATIONAL SHARES AT A LEVEL HIGHER THAN THAT WHICH MIGHT OTHERWISE PREVAIL. HOWEVER, THERE IS NO ASSURANCE THAT THE STABILIZING MANAGER OR ANY AGENT OF THE STABILIZING MANAGER WILL UNDERTAKE STABILIZATION ACTION. ANY STABILIZATION ACTION MAY BEGIN ON OR AFTER THE DATE ON WHICH ADEQUATE PUBLIC DISCLOSURE OF THE FINAL TERMS OF THE OFFER OF THE INTERNATIONAL SHARES IS MADE AND, IF BEGUN, MAY BE DISCONTINUED AT ANY TIME BUT MUST END NO LATER THAN 30 DAYS AFTER THE DATE OF ALLOTMENT OF THE INTERNATIONAL SHARES. ANY STABILIZATION ACTION OR OVER-ALLOTMENT MUST BE CONDUCTED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND RULES.

Stabilization will be carried out in accordance with applicable laws and rules, including (a) Article 159, paragraph 3 of the FIEA (b) Articles 20 to 26 of the Order for Enforcement of the Financial Instruments and Exchange Act (Cabinet Order No. 321 of 1965, as amended) and (c) Articles 4 to 8 of the Cabinet Office Order on Restrictions on Securities Transactions (Cabinet Office Order No. 59 of 2007, as amended).

TABLE OF CONTENTS

PRESENTATION OF FINANCIAL AND OTHER INFORMATION

In this offering circular, terms such as “we,” “our,” “us” and “Renesas” refer to Renesas Electronics Corporation and its consolidated subsidiaries or, as the context may require, Renesas Electronics Corporation on a non-consolidated basis, except in the annual financial statements of Dialog (as defined below), where reference to “we,” “our” and “us” refers to Dialog. The term “Dialog” refers to Dialog Semiconductor plc and its consolidated subsidiaries or, as the context may require, Dialog Semiconductor plc on a non-consolidated basis. See “Proposed Acquisition of Dialog” below.

The term “IDT” refers to Integrated Device Technology, Inc., which we acquired on March 30, 2019. The term “Renesas Electronics America Inc.” also refers to Integrated Device Technology, Inc. after completion of its name change in relation to an absorption-type merger of former Integrated Device Technology, Inc. by IDT on January 1, 2020. The term “Intersil” refers to Intersil Corporation, which we acquired on February 24, 2017. The term “Former Renesas Electronics America Inc.” also refers to Intersil after completion of its name change on January 1, 2018.

References in this offering circular to “yen” or “¥” are to Japanese yen, references to “U.S. dollars,” “U.S. dollar,” “dollars,” “U.S.$” or “$” are to United States dollars and references to “Euros” are to the currency of the European Economic and Monetary Union.

Yen figures and percentages included in this offering circular have been rounded to the figures shown unless otherwise noted. However, in some cases, figures presented in tables have been adjusted to match the sum of the figures to the total amount.

Our fiscal year end is December 31. Unless otherwise specified or required by the context, references to “days” are to calendar days, references to “years” are to calendar years and references to “fiscal years” are to our fiscal years. All of our financial information is presented on a consolidated basis, unless otherwise stated.

Our audited consolidated financial statements as of and for the fiscal years ended December 31, 2018, 2019 and 2020 have been prepared in accordance with International Financial Reporting Standards, or IFRS, and our unaudited condensed quarterly consolidated financial statements as of March 31, 2021 and for the three months ended March 31, 2020 and 2021 included herein have been prepared in accordance with International Accounting Standard 34 “Interim Financial Reporting.” We adopted IFRS for financial reporting purposes from the fiscal year ended December 31, 2018, using a transition date of January 1, 2017. Our audited consolidated financial statements as of and for the fiscal year ended December 31, 2018, with the required comparative statement of financial position as of January 1, 2017 (the transition date to IFRS) have been prepared in accordance with IFRS.

Prior to the adoption of IFRS, we prepared our consolidated financial statements in accordance with accounting principles generally accepted in Japan, or Japanese GAAP, which differs from IFRS and from accounting principles generally accepted in the United States of America, or U.S. GAAP. Prospective investors should consult their own professional advisors for an understanding of the differences among Japanese GAAP, IFRS and U.S. GAAP, or generally accepted accounting principles in other jurisdictions and an understanding of how those differences might affect the financial information contained herein.

We have changed our financial statement segment reporting beginning from the nine months ended September 30, 2019 after our acquisition of IDT in March 2019 and the transition to an organizational structure based on two business units. We transitioned from a single operating segment to two segments: our Automotive Business and our Industrial/Infrastructure/IoT Business segments. The description of our business and operations in “Business” is based on our most recent segment classification.

As a result, segment information for the fiscal year ended December 31, 2019 is presented on the basis of these segment reclassifications, and segment information for the fiscal year ended December 31, 2018 that is presented together therewith has been reclassified to conform to such changes. As a result, the segment information provided herein is not presented on a comparable basis for each of the fiscal years ended December 31, 2017, 2018, 2019 and 2020.

In addition, following the acquisition of IDT and the absorption-type merger of Former Renesas Electronics America Inc. by IDT, we revised the classification of expenses in order to better present our financial position and results of operations from the three months ended March 31, 2020. This change in accounting policy has been applied retrospectively to the consolidated financial statements for the fiscal year ended December 31, 2019.

The annual consolidated financial statements of Dialog as of and for the fiscal years ended December 31, 2019 and 2020, contained elsewhere in this offering circular, were prepared in accordance with IFRS as adopted by the European Union. The quarterly consolidated financial statements of Dialog as of or for the three months ended March 27, 2020 and April 2, 2021, contained elsewhere in this offering circular, were prepared in accordance with IAS 34 *Interim Financial Reporting* as adopted by the European Union. See "Proposed Acquisition of Dialog" below.

INDUSTRY AND MARKET DATA

We make statements in this offering circular about our competitive position and market share in, and the market size of, the Japanese and global semiconductor industries. In addition, we include statistics relating to industry and economic trends and foreign currency exchange rates. We have made these statements on the basis of statistics and other information from third-party sources, such as governmental agencies and industry or general publications that we believe are reliable. However, market studies and analyses by third parties are sometimes based on information and assumptions that may not be accurate or technically correct, and their methodology is by nature forward-looking and speculative. Although we have no reason to believe any of this information or these reports are inaccurate in any material respect, neither we nor the international managers have independently verified any of the data from third-party sources nor have we nor the international managers ascertained the underlying economic and other assumptions relied upon therein.

All statements in this offering circular attributable to "Gartner" represent Renesas' interpretation of data, research, opinions or viewpoints published as part of a syndicated subscription service by Gartner, Inc., and have not been reviewed by Gartner. Each Gartner publication speaks as of its original publication date (and not as of the date of this offering circular). The opinions expressed in Gartner publications are not representations of fact, and are subject to change without notice.

FORWARD-LOOKING STATEMENTS

This offering circular contains forward-looking statements regarding our intent, belief or current expectations of our management with respect to the future results of operations and financial condition. In many cases, but not all, the words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “probability,” “project,” “risk,” “seek,” “should,” “target,” “will” and similar expressions, as they relate to us or our management, are intended to identify forward-looking statements. You can also identify forward-looking statements by discussions of strategy, plans or intentions. Forward-looking statements reflect our current views with respect to future events and are subject to risks, uncertainties and assumptions, including the risk factors described in this offering circular. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described here as anticipated, believed, estimated, expected or intended.

Forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and actual results may differ from those in the forward-looking statements as a result of various factors, and the differences may be material.

Given these and other risks and uncertainties, you should not place undue reliance on forward-looking statements, which speak only as of the date of this offering circular. We disclaim any obligation to update or, except in the limited circumstances required by the Tokyo Stock Exchange, announce publicly any revision to any of the forward-looking statements contained in this offering circular to reflect any actual events or developments. The information contained in this offering circular, including without limitation the information under “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business” identifies important factors in addition to those referred to above that could cause differences between our expectations of future performance and actual results.

ENFORCEMENT OF CIVIL LIABILITIES

We are a Japanese joint stock corporation incorporated with limited liability under the laws of Japan. Most of our directors, corporate auditors and the independent auditor, and most of our executive officers reside in Japan, and a substantial portion of our assets and most of the assets of these persons are located outside the United States. As a result, it may not be possible for holders or beneficial owners of shares of our common stock to effect service of process within the United States or elsewhere outside Japan upon us or any of these persons or to enforce against us or any of these persons judgments obtained in U.S. courts or elsewhere outside Japan, whether or not predicated upon the civil liability provisions of the federal securities or other laws of the United States or any state thereof or elsewhere outside Japan. We have been advised by Nagashima Ohno & Tsunematsu, our Japanese counsel, that in original actions or in actions for enforcement of judgments of U.S. courts brought before Japanese courts, there is some doubt as to the enforceability in Japan of liabilities based solely on the federal securities or other laws of the United States or any state of the United States.

GLOSSARY

Certain industry and other terms are used in this offering circular to describe our business and financial performance. Some of the terms used in this offering circular may not correspond to common industry definitions for such terms.

The following is a list of specialized terms used in this offering circular:

Term	Description
Advanced Driver Assistance Systems (ADAS) ...	Systems developed to assist the driver in the control of a vehicle, including information components such as sensors, cameras and driver interface, and control components including automatic steering and brake intervention. Current generation ADAS features include adaptive cruise control, blind-spot monitoring, lane-departure warning, night vision, lane-keeping assist and collision warning systems.
Application-Specific Integrated Circuit (ASIC) ..	A customized integrated circuit designed for a specific user, rather than general-purpose use.
Automotive Open System Architecture (AUTOSAR)	Open and standardized automotive software architecture for electronic systems, aimed at improving performance safety and environmental friendliness.
Automotive Safety Integrity Level (ASIL)	A risk classification scheme defined by the ISO 26262—Functional Safety for Road Vehicles standard. Ratings range from ASIL A to ASIL D, with ASIL D having the highest integrity requirements on the product.
Bluetooth Low Energy (BLE)	A wireless technology designed for very low power operation and optimized for short burst data transmission.
Bipolar CMOS DMOS (BiC-DMOS)	A type of lateral transistor structure that integrates three formerly separate semiconductor technologies, those of the bipolar junction transistor, the CMOS transistor and the DMOS transistor, in a single integrated circuit device.
BMIC	Battery management IC.
Central Processing Unit (CPU)	A circuit running a computer program.
Controller Area Network (CAN)	An electronic network allowing microcontrollers and devices to communicate with each other in applications without the need for a host computer.
Complementary Metal Oxide Semiconductor (CMOS)	A MOS (Metal Oxide Semiconductor) technology in which both P-channel and N-channel transistor components are fabricated on the same die to provide integrated circuits that use less power than those made with other MOS or bipolar processes.
Electronic Control Unit (ECU)	An automotive component that controls one or more of the electrical system or subsystems in a transport vehicle.
Electric Vehicle (EV)	Vehicles with no internal combustion engine at all and that use only one or more electric motors for both motive power and regeneration.

Term	Description
Embedded A.I. (e-AI)	Real-time, low-power artificial intelligence processing solution using deep-learning in endpoint embedded devices.
GPGPU	General-purpose computing on graphics processing unit.
Hybrid Electric Vehicle (HEV)	Vehicles that utilize electric motors for motive power under certain conditions, such as when starting from a stationary state and when driving at low speed, and for electrical regeneration, but that still rely on conventional internal combustion engines for motive power under most conditions.
Industry 4.0	The current model of industrial IoT, in which the trend is toward increased connectivity combined with increasingly autonomous and interactive machines (which may be capable of individual deep learning through e-AI) to drive operational efficiency and reduced costs.
Insulated-gate bipolar transistor (IGBT)	A three-terminal power semiconductor device primarily used as an electronic switch to combine high efficiency and fast switching. Commonly used in EVs.
Integrated circuit (IC)	A set of electronic circuits on one small plate of semiconductor material (a chip).
In-vehicle Infotainment (IVI)	A program or system, such as those used in car navigation, audio and instrument clusters, deliver either entertainment or information content
Metal-oxide-semiconductor field-effect transistor (MOSFET)	A type of transistor (semiconductor device) used for amplifying or switching electronic signals.
Micro Controller Unit (MCU)	A small computer with embedded main memory that is part of automated functions such as engine control systems. Automotive MCUs are typically used for powertrain, body and safety management systems.
Microprocessor Unit (MPU)	A component incorporating the functions of a computer's CPU on a single IC, or at most a few ICs without embedded main memory.
Mixed-signal	An integrated circuit that has both digital and analog functions on the same semiconductor chip, permitting a high degree of system integration.
Nanometer (nm)	Equal to one billionth of a meter (0.0000000001 m), used in internal measurements of Renesas components, in particular the ratio of size to flash memory.
OIS	Optical image stabilizer.
Open-RAN (O-RAN)	A concept based on interoperability and standardization of Radio Access Network elements, including a unified interconnection standard for white-box hardware and open-source software elements from different vendors. O-RAN enables virtualization of the RAN, and the semiconductors for the hardware of the RAN will be the same as those for general-purpose servers in data centers.
PMIC	Power management IC.

Term	Description
Power discrete	A class of electronic components, such as power MOSFETs, bipolar power transistors and rectifiers, used for switching or controlling large voltages, currents and outputs.
SOTB	Silicon on Thin Buried Oxide, a type of process resulting in vastly improved energy performance while also reducing leakage, a problem commonly encountered as process size is reduced.
System on a Chip (SoC)	An integrated circuit that combines the components and functionality of a computer or electronics system onto a single chip, such as a microcontroller. SoCs are used in devices such as car information systems (R-Car).
xEV	Refers to both EVs and HEVs, or to technology or features common to both EVs and HEVs.

SUMMARY

This summary highlights selected information contained elsewhere in this offering circular. You should read this summary together with the more detailed information, including "Risk Factors" and the financial statements and related notes, appearing elsewhere in this offering circular before making an investment decision. The following summary is qualified in its entirety by the more detailed information and financial statements and notes thereto included elsewhere in this offering circular.

Overview

We are a leading global semiconductor company that designs, develops, manufactures, markets and distributes a broad range of semiconductor products and solutions with an increasing focus on the complex customer needs of the automotive, industrial, infrastructure and IoT sectors in a variety of applications, such as factory automation, home appliances and data centers.

Our key product types are MCUs, SoCs, analog semiconductor devices and power semiconductor devices, which accounted for approximately 46%, 13%, 32% and 8%, respectively, of our revenue in the fiscal year ended December 31, 2020, with the remaining 2% consisting of non-recurring engineering and other revenue.

We were the number one MCU supplier by revenue in 2020, according to Gartner. In addition, according to our internal estimates based on WSTS research, we had the largest presence within the automobile MCU market, with a 33% share of supply for the fiscal year ended December 31, 2020.

Our leading position in semiconductors has been supported by our industry-leading technological capabilities and strong global customer base, and we believe these key business strengths combined with our sound financial base will help us take advantage of the significant opportunities that are arising within the automotive, industrial, infrastructure and IoT sectors.

Our operations are organized into two reportable segments for financial reporting purposes: Industrial/Infrastructure/IoT Business and Automotive Business. In addition, we account for other businesses not included in these reportable segments under Other in our consolidated financial statements.

- *Industrial/Infrastructure/IoT Business.* This segment primarily focuses on a variety of product categories that are aimed to support various "core/edge/endpoint" applications and society. We primarily supply MCUs, SoCs/MPUs, and analog semiconductor devices in each of these three categories, and focus on application-specific solutions that include products for customers in a variety of applications, such as data centers, wireless infrastructure, PCs/tablets, factory automation, smart meters and home appliances, all of which are tailored to our customers' requirements as well as for a wide variety of applications for a broad customer base that includes general-purpose applications.

  For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from the Industrial/Infrastructure/IoT Business segment represented 50.8% and 47.4%, respectively, of consolidated revenue for each period. In addition, revenue for the fiscal year ended December 31, 2020 from our industrial, infrastructure and IoT businesses accounted for approximately 37%, 26% and 36%, respectively, of our revenue within this segment, according to our managerial accounting data.

- *Automotive Business.* This segment focuses on two primary application fields: "automotive control" and "ADAS/Cockpit." Automotive control consists of semiconductor devices for controlling automobile power train, chassis, gateways and bodies, while ADAS/Cockpit consists of semiconductor devices used in ADAS, automotive information and entertainment systems such as camera sensing systems and In–Vehicle Infotainment (IVI) systems. Between these two categories, we provide solutions for a variety of automobile applications, including those used in xEVs, as well as in ADAS + automotive infotainment & instruments applications, among others. We mainly supply microcontrollers (MCUs), system-on-chips (SoCs), analog semiconductor devices and power semiconductor devices in each of these categories.

  For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from the Automotive Business segment represented 47.6% and 50.7%, respectively, of consolidated revenue for each period. In addition, revenue for the fiscal year ended December 31, 2020 from our "automotive control" and "ADAS/Cockpit" applications accounted for approximately 72% and 27%, respectively, of our revenue within this segment, according to our managerial accounting data.

- *Other*. Our Other business consists of the commissioned development and manufacturing from our design and manufacturing subsidiaries.

  For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from Other represented 1.5% and 1.9%, respectively, of consolidated revenue for each period.

Our acquisitions of Intersil in 2017 and IDT in 2019 were a significant step in our plans for continued growth. With these acquisitions, we gained access to a vast array of robust analog mixed-signal capabilities in embedded systems. The combination of these products with our advanced MCUs and SoCs has enabled us to offer comprehensive solutions that support the increasing demand of high data processing performance. These solution offerings help bring optimized systems from external sensors through analog front-end devices to processors and interfaces, which enable us to deliver high value-added innovation to our customers. In addition, our acquisition of IDT's products has enabled us to extend our reach to fast-growing data economy-related applications, including data center and wireless infrastructure and has strengthened our presence in the automotive, industrial, infrastructure and IoT sectors.

We have begun capitalizing on the integration of IDT by offering new complementary Analog + Power + Embedded Processing product combinations that work together to deliver comprehensive solutions that help customers accelerate their designs and get to market at a faster rate. These combinations, which we call our "Winning Combinations," focus on verticals including industrial, infrastructure, automotive and consumer.

Moving forward, we plan on growing both our Industrial/Infrastructure/IoT Business and Automotive Business segments based on the dynamics inherent in their respective industries. We also aim to focus on enhancing the ease-of-use for our customers by making greater use of software solutions.

Our planned acquisition of Dialog is also a key factor in our growth strategy. We expect the acquisition to contribute to our growth strategy by further expanding our portfolio in delivering comprehensive solutions to improve performance and efficiency in high-computing electronic systems and enabling us to build more robust and comprehensive solutions to serve high-growth segments of the IoT, industrial and automotive segments. In addition, the planned acquisition will enable us to add engineering and design scale in low-power analog mixed signal products. The addition of Dialog's strong R&D and geographical presence will also allow us to expand our line-up of innovative solutions and make our go-to-market initiatives more effective to provide seamless and borderless services to our customers around the globe. For more information on our planned acquisition of Dialog, see "Proposed Acquisition of Dialog" and "Business—Our Strategies—Our proposed acquisition of Dialog will increase our presence in analog and non-auto markets, which will accelerate our growth and create synergies" below.

Revenue, operating profit and profit attributable to owners of parent for the fiscal year ended December 31, 2020 were ¥715,673 million, ¥65,142 million and ¥45,626 million, respectively, and revenue, operating profit and profit attributable to owners of parent for the three months ended March 31, 2021 were ¥203,678 million, ¥30,191 million and ¥13,714 million, respectively.

As of March 31, 2021, we had total assets of ¥1,688,082 million. As of March 31, 2021, we had 74 consolidated subsidiaries. We had 18,753 employees as of December 31, 2020.

Our Proposed Acquisition of Dialog

On February 8, 2021, we reached an agreement with Dialog on the terms of an acquisition of the entire issued and to be issued share capital of Dialog by Renesas (the "Dialog Acquisition"). Under the proposed terms of the Dialog Acquisition, we will pay €67.50 in cash per share of Dialog's common stock, which represents estimated aggregate consideration of approximately €4.9 billion, or approximately ¥615.7 billion (using an exchange rate of 126 yen per Euro as of February 3, 2021).

The Dialog Acquisition is to be implemented by means of a Court-approved Scheme of Arrangement (the "Scheme") under Part 26 of the U.K. Companies Act 2006. On March 8, 2021, we sent the Scheme Document to the shareholders in relation to the Scheme (the "Scheme Document"), which sets out the full terms and conditions of the Scheme.

The Dialog Acquisition is subject to customary closing conditions, various antitrust and other regulatory approvals and other conditions. Subject to these approvals and the satisfaction or waiver of the other conditions set out in the Scheme Document, the Scheme is expected to become effective by the end of 2021.

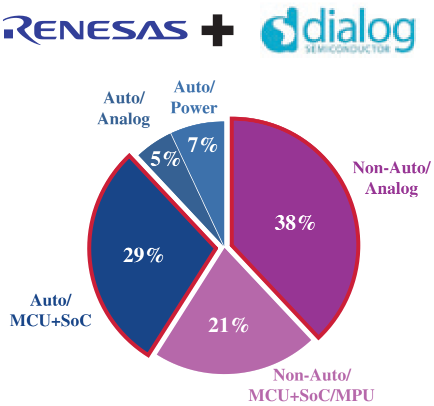
For more information on the proposed Dialog Acquisition, see "Proposed Acquisition of Dialog" and "Risk Factors—Risks Related to our Proposed Acquisition of Dialog" below.

Our Strengths

We are a leading global MCU, SoC and analog supplier with a strong presence in numerous diversified applications & products that serve both the automotive and non-automotive sectors.

We were the number one MCU supplier by revenue in 2020, according to Gartner. In addition, according to our internal estimates based on WSTS research, we have a leading presence in the automobile MCU market, with a 33% share of supply for the fiscal year ended December 31, 2020. We also had the third largest position for non-auto / analog products according to Gartner research for the fiscal year ended December 31, 2020. We are well-diversified among our two business segments as a result of our acquisitions of Intersil and IDT. Our Industrial/Infrastructure/IoT Business segment accounted for 50.8% of our revenue for the fiscal year ended December 31, 2020 while our Automotive Business segment accounted for 47.6%. On an adjusted EBITDA basis, our Industrial/Infrastructure/IoT Business segment accounted for 57.8% of our adjusted EBITDA while our Automotive Business segment accounted for 42.3% for the fiscal year ended December 31, 2020. See "Selected Financial and Other Data—Non-GAAP Measures."

The below chart shows the illustrative combined application and product revenue mix of Renesas and Dialog calculated based on our management accounting figures and our estimates for Dialog for the fiscal year ended December 31, 2020:



We are well positioned in the Industrial, Infrastructure and IoT subsegments for faster growth by expanding our footprint through inflection points.

We believe that our reputation for robust industrial products capable of weathering extended life cycles and our superior solutions in our industrial, infrastructure and IoT subsegments will help us to secure a significant proportion of the growth attributable to the anticipated expansion of infrastructure equipment such as data centers and wireless infrastructure as a result of the memory module shift from DDR4 to DDR5, new power management specifications, 5G O-RAN and other infrastructure expansions and IoT equipment such as PCs, tablets and industrial equipment such as factory automation. Fueled by the Intersil and IDT integrations, we have also expanded our analog solution lineup. We are poised to extend our share in a variety of fast-growing data economy-related applications, such as PCs, tablets, wireless infrastructure and data centers, with a variety of diverse product offerings that combine our world-leading MCUs, SoCs/MPUs and Analog products.

Within our industrial subsegment, we achieved revenue of ¥133.4 billion for the fiscal year ended December 31, 2020, which consisted of ¥59.4 billion for MCU, ¥39.8 billion for SoC/MPU and ¥34.2 billion for Analog. We aim to achieve growth consistent with the serviceable available market ("SAM") for this sector, and according to Gartner market data, SAM for this segment is expected to grow at a 7.0% CAGR from $42.6 billion in 2019 to $63.7 billion in 2025, with key drivers of robotics applications, human-machine interaction (HMI) and real-time synchronization.

Within our IoT subsegment, we achieved revenue of ¥130.8 billion for the fiscal year ended December 31, 2020, which consisted of ¥67.9 billion in MCU, ¥1.9 billion in SoC/MPU and ¥61.0 billion in Analog. We aim to achieve growth in excess of the SAM for this sector, and according to Gartner market data, SAM for this segment is expected to grow at a CAGR of 6.7% from $66.2 billion in 2019 to $97.7 billion in 2025, with key drivers of connectivity, endpoint computing and power efficiency.

Our first primary strategy for the industrial and IoT sectors is to expand our product lineup and launch new products that enable endpoint intelligence. Second, we are aiming to promote our "deeper and broader" strategy, which aims to increase sales to the same customers and reach a wider range of customers through our "Winning Combinations" of both analog and digital products. See "Business—Our Strategies—We are aiming to expand into rapidly growing and higher margin areas in the Industrial, Infrastructure and IoT sectors by expanding our product and solution offering capabilities."

Within our infrastructure subsegment, we achieved revenue of ¥96.1 billion for the fiscal year ended December 31, 2020, which consisted of ¥3.9 billion for SoC/MPU and ¥92.2 billion for Analog. We aim to achieve growth in excess of the estimated SAM, which is expected to grow at a CAGR of 6.8% from $69.9 billion in 2019 to $104.0 billion in 2025, according to Gartner, with key drivers of data centers and cloud applications, power efficiency and 5G infrastructure. Our primary strategy for this sector is to take advantage of the multiple inflection points and key growth drivers for analog products, such as next-generation DDR5 data centers and 5G infrastructure. See "Business—Our Strategies—We are aiming to expand into rapidly growing and higher margin areas in the Industrial, Infrastructure and IoT sectors by expanding our product and solution offering capabilities."

The SAM for the Industrial/Infrastructure/IoT Business segment as a whole is expected to grow at a CAGR of 6.8% from 2019 to 2025, according to Gartner, and we are aiming to achieve growth in excess of this SAM.

We are a global leader driving sophistication of automotive electronics.

Our strength in the automotive field is founded upon our accumulation of deep and wide-ranging technological know-how in developing and producing semiconductor products that meet the sophisticated quality and reliability requirements that characterize the automotive semiconductor sector, which have been cultivated through our long history of servicing automotive customers.

Within our automotive control subsegment, we achieved revenue of ¥246.8 billion for the fiscal year ended December 31, 2020, which consisted of ¥151.3 billion for MCU, ¥7.2 billion for SoC, ¥35.0 billion for Analog and ¥53.4 billion for Power products. We aim to achieve growth consistent with the SAM for this sector, which, according to Strategy Analytics, is expected to grow at a CAGR of 7.9% from 2019 to 2025.

Within our ADAS/Cockpit subsegment, we achieved revenue of ¥91.3 billion for the fiscal year ended December 31, 2020, which consisted of ¥47.1 billion for MCU, ¥37.5 billion for SoC, ¥5.3 billion for Analog and ¥1.4 billion for Power products. We aim to achieve growth consistent with the SAM for this sector, which, according to Strategy Analytics is expected to grow at a CAGR of 9.7% from 2019 to 2025.

The CAGR for SAM for the Automotive Business segment as a whole is expected to be 8.5% from 2019 to 2025, according to Strategy Analytics.

Our first primary strategy is to promote the launch of next-generation products and solutions within the MCU/SoC space with our leading position in order to further increase our market share. Second, within ADAS/Cockpit and SoCs for automotive control, we are aiming to take advantage of the structural shift in the electronic structure of automobiles by leveraging our hardware and software capabilities. Lastly, we are aiming to utilize a "deeper and broader" strategy in the analog and power fields, aiming to take advantage of the growth within xEVs with our Winning Combinations. See "Business—Our Strategies—We aim to continue to improve our fundamental positioning and improve our leading position within automotive semiconductors to capture further growth opportunities."

We are also leading the transition to next-generation electronic vehicles and believe that next-generation car platforms will enable SoC growth via both scalability and flexibility. Our comprehensive product portfolio enables co-development with OEM & Tier 1 suppliers from the vehicle concept phase. We believe that the change of vehicle architecture from diversified architecture to domain and zone architectures will also play a key role for the next generation of automotive solutions. We also believe that automotive MCU/SoC is a growth driver during the short term, and we have a presence within automotive MCU/SoC of 33%, 28%, 26%, 22%, and 19% for body, xEV, powertrain, Chassis & Safety and ADAS + Infotainment & Instruments, respectively. We have also developed a high-performance platform for automotive information applications, including ADAS applications, called R-Car, which supports the development of systems with the three core automotive ADAS/Cockpit functions of sensing, cognition and infotainment & instruments. The importance of each of these three functions is expected to increase as current generation driver assistance features evolve into more advanced systems in which the driver plays a more passive role in vehicular control, and ultimately give way to fully driverless automobiles. We will build on our successful R-Car chip and system architecture to develop solutions for each of these functions individually, as well as part of our integrated R-Car platform. Revenue from our R-Car products has increased from approximately ¥22 billion for the fiscal year ended December 31, 2018 to approximately ¥36 billion for the fiscal year ended December 31, 2020.

We have cultivated strong customer relationships and have a large and diversified global customer base.

We have strong relationships with our customers worldwide. Our automotive customers include Japanese and global Tier 1 suppliers such as DENSO Corporation, Continental, Bosch, Mitsubishi Electric and Hitachi which in turn sell their components to Japanese OEMs such as Toyota, Honda and Nissan and overseas OEMs such as Audi, BMW, Daimler, Volkswagen and General Motors. Our non-automotive customers include world-class manufacturers such as Siemens AG and Mitsubishi Electric for our smart factory solutions, Samsung Electronics Co., Ltd. (“Samsung Electronics”) for data centers, and Midea Group Co. Ltd. (“Midea”) and Daikin Industries, Ltd. (“Daikin”) for our home appliance solutions.

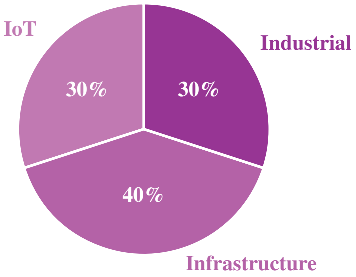
Our customer relationships in Japan date back many decades based on our and our predecessors’ position as the country’s primary suppliers of semiconductor products, while our overseas relationships have been cultivated through our long history of overseas expansion efforts and M&A. We believe that our customer base in Japan is particularly robust and benefits from the tendency of Japanese customers to place a high value on establishing mutually beneficial relationships with their suppliers.

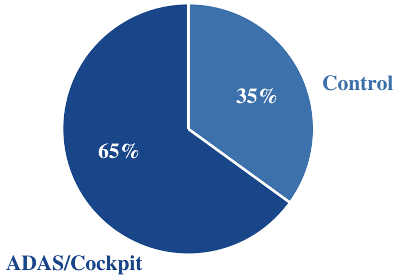
Many of our products, particularly those designed to meet a particular customer’s design specifications, are developed in a collaborative process called “design-in,” which enables us to provide innovative products that are customized to each customer’s exact needs. In addition, through our experience with design-in processes with our customers, we have gained critical customer- and industry-specific know-how, and we have become well-versed in customer-specific design and development practices, which often enables us to shorten the time between commencement of product development and commercialization. The customer- and industry-specific know-how that we have accumulated enhances the loyalty of our customers and encourages customers to contact us again during the early stages of their next product development and planning, thus fueling a virtuous cycle that continuously enhances our experience and know-how, strengthens our market position and heightens the barriers to entry for our competitors that lack comparable customer relationships.

In addition, by securing product design-in opportunities, we can more effectively secure future revenue over the lifetime of such products, which is typically in the range of five to eight years for automotive and industrial applications, and in the range of three to five years for other products. We call the aggregate revenue with respect to a design-in product expected to be realized from the specific customer over the product’s lifetime as “lifetime value,” or LTV (Life Time Value). We have recently experienced an overall increase in total LTV as a result of our design-in efforts, including the design-in efforts made following our acquisitions of Intersil and IDT as a result of our cross selling and winning combination solutions.

For our Industrial/Infrastructure/IoT Business segment, we have been awarded design-ins with an estimated total LTV of ¥512 billion and ¥610 billion for the fiscal years ended December 31, 2019 and 2020, respectively. For the same periods, we increased our percentage of LTV for design-in solutions that utilize our winning combination solutions within our total design-in LTV for this segment from 2% to 12%. For our Automotive Business segment, we achieved design-ins with an estimated total LTV of ¥451 billion (including additional pro forma amounts from former IDT for the six months ended June 30, 2019) and ¥720 billion for the fiscal years ended December 31, 2019 and 2020, respectively. For the same periods, we increased our percentage of LTV for design-in solutions that utilize our winning combination solutions within our total design-in LTV for this segment from 0% to 11%.

The below graphs show the breakdown of our design-in LTV by product for our Industrial/Infrastructure/IoT Business segment and Automotive Business segment for the fiscal year ended December 31, 2020:





LTV is a measure that we have formulated and used internally for management's assessment of business performance and strategic initiative planning. The LTV formula involves a considerable degree of future estimation and subjective judgment, including estimating volumes and per-unit prices of products to be purchased in the future, as well as the estimated lifespan and likelihood of cancellation of particular product models. We may change and in fact have in the past changed our LTV calculation formula, and thus a direct period-to-period comparison may not be meaningful beyond describing very general trends over an extended period. Potential investors are cautioned not to place undue reliance on LTV.

We have a successful track record of M&A strategy execution and successful integration of prior acquisitions.

We have consistently and successfully executed on our M&A strategy in recent years. Since 2016, we have diversified our product mix by moving towards analog and mixed signal products especially through our acquisitions of Intersil and IDT. According to our estimations, we will have increased our proportion of revenue from analog applications by 30 percentage points and reduced our reliance on MCU products by 19 percentage points comparing our standalone revenue breakdown in 2016 to the revenue breakdown of us and Dialog for 2020 on a simple combined basis. We have also diversified our talent in recent years, and will have achieved an increase in overseas R&D engineers by 28 percentage points and an increase in engineers in our analog and power applications by 24 percentage points from 2017 to 2020 on a simple combined basis accounting for the planned Dialog Acquisition as of July 2017 without including figures from Intersil. Moreover, our acquisitions of Intersil and IDT and our planned acquisition of Dialog are leading to a diversification of our revenue sources, with greater shifts to data center, infrastructure and other industrial applications. We expect the Dialog Acquisition to further contribute to diversification of our revenue base, with non-automotive revenue of Dialog and Renesas on a simple combined basis increasing 15 percentage points compared to our non-automotive revenue in 2016.

In the case of both Intersil and IDT, we were able to successfully achieve cost synergies in excess of our initial targets and plans. For Intersil, we initially targeted short-term cost synergies of $40 million on an annual run rate adjusted operating profit basis compared to Intersil's forecasted costs and revenue for the fiscal year ended December 31, 2016 and have managed to achieve $63 million of gross savings on an annual run rate basis as of December 31, 2020. For IDT, we achieved gross savings on an annual run rate basis of $136 million as of December 31, 2020 compared to our initial targeted plan of $80 million, which we calculated by comparing to IDT's forecasted costs and revenue for the fiscal year ended December 31, 2019. We achieved these cost synergies due to increased efficiencies in our organization, operations and the use of our patent and design tools, in addition to improvements in our distribution margins and procurement policies. Moreover, we achieved significant revenue synergies by acquiring new customers and increasing sales per customer, with the number of new customers classified as Industrial/Infrastructure/IoT Business segment customers increasing from 13,980 to 20,560 and LTV from new design-in opportunities from $129 million to $1,570 million comparing the fiscal years ended December 31, 2019 and 2020.

We possess a sound financial base and strong cash-flow generation capabilities to support our business and further growth.

Through our successful implementation of our "One Global Renesas" plan and our integration of both Intersil and IDT, we have been able to significantly strengthen our financial position and our cash-flow generation capabilities in recent years. Our adjusted EBITDA has increased from ¥199.7 billion for the fiscal year ended December 31, 2018 to ¥223.2 billion for the fiscal year ended December 31, 2020. Our sound financial base and solid cash flow enable us to respond flexibly to the business environment as it changes, including the ability to take advantage of inorganic growth opportunities as they may arise in the future and quick deleveraging for flexible financing for investments.

We also have a track record of maintaining a well-controlled inventory base by utilizing both DOI (Days-of-Inventory) and WOI (Weeks-of-Inventory) metrics in order to understand the appropriate level of both in-house and sales channel inventories to meet demand. In addition, we have been able to improve our inventory management in recent years as measured by our turnover. In addition, we have managed to achieve fixed cost reductions in recent years from declines in depreciation, early retirement programs and integration cost synergies from our acquisitions of Intersil and IDT. We have also been able to achieve significant reductions in our selling, general and administrative expenses as a percentage against revenue, with improvements due to the outsourcing of certain administrative tasks and we expect to achieve further reductions by reducing logistics costs and spending on information technology in the future.

We have a diversified management team and an innovative corporate structure that have helped in accelerating the realization of our "One Global Renesas" initiative.

We have a global management team from a variety of diverse backgrounds that is highly experienced and possesses solid industry knowledge. In contrast to certain other Japanese corporations and corporate structures, we have been open to inviting talented executives from outside the company and have successfully integrated a number of high-level executive personnel from our past acquisitions, while also utilizing executives with extensive experience at Renesas. Our management is also committed to a variety of environmental, social and governance (ESG) initiatives, and we have achieved recognition for such initiatives around the world.

Following the acquisition of IDT, our management team has successfully utilized organizational reforms of our business under our "One Global Renesas" initiative, which involved the reorganization of our business into two separate financial reporting segments in order to more appropriately disclose our financial figures and in a way that thoroughly integrates the operations of both Intersil and IDT.

We possess industry-leading technological capabilities with advanced manufacturing know-how.

We possess cutting-edge technological capabilities backed by a long operating history and a strong track record supporting our position as a technological leader in our industry. We have led and cultivated our industry's technological development and continue to do so through the launch of state-of-the-art, high quality and high reliability products. Significant developments in semiconductor performance are achieved through miniaturization of the semiconductor fabrication process, which allows finer and more complex circuitry to be printed for a given surface area.

Our Strategies

Our proposed acquisition of Dialog will increase our presence in analog and non-auto markets, which will accelerate our growth and create synergies.

Dialog is an innovative provider of highly-integrated and power-efficient mixed-signal ICs for a broad array of customers within the IoT, consumer electronics and high-growth segments of the automotive and industrial sectors. For the fiscal year ended December 31, 2020, Dialog achieved revenue of $1,376 million, underlying gross profit of $697 million, underlying operating profit of $297 million and underlying EBITDA of $357 million, with underlying gross margins of 50.6%, underlying operating margins of 21.6% and underlying EBITDA margins of 25.9%. See "Proposed Acquisition of Dialog—Selected Financial Information of Dialog—Non-IFRS Measures." Dialog brings a wide range of product offerings, with 58% of their revenue from their Custom Mixed Signal segment, and 20% from their Advanced Mixed Signal segment for their fiscal year ended December 31, 2020. We believe that the acquisition of Dialog's low-power and mixed-signal technologies will enhance our product portfolio and help our expansion into high-growth segments within the IoT field.

Following the licensing of their power management technologies to Apple in 2019, the growth composition of Dialog's revenue has changed in recent years, with revenue of licensed legacy products decreasing at a CAGR of 35% from $867 million for the fiscal year ended December 31, 2018 to $363 million for the fiscal year ended December 31, 2020, while revenue of new custom mixed-signal products for Dialog's largest customer has increased at a CAGR of 65% from $149 million for the fiscal year ended December 31, 2018 to $407 million for the fiscal year ended December 31, 2020 and its other revenue has increased at a CAGR of 19% from $426 million for the fiscal year ended December 31, 2018 to $606 million for the fiscal year ended December 31, 2020. In addition, Dialog's underlying revenue excluding licensed legacy products and new custom mixed-signal products for Dialog's largest customer has shown growth in recent quarters, with year-on-year growth of such revenue increasing from negative 6% in the three months ended March 29, 2019 to 20% in the three months ended March 27, 2020 and 76% in the three months ended April 2, 2021.

We believe that bringing together Renesas and Dialog will extend the combined group's reach to a broader customer base and open up additional growth potential in certain key growth segments. In addition, we hope to expand our customer reach with the use of our larger sales force and distribution channels and take advantage of new cross selling opportunities. Moreover, we plan on utilizing our Winning Combinations to further increase the sales of our existing products by being able to provide our customers with an even broader range of products and applications. We believe that the addition of Dialog's strong R&D and geographical presence will also allow us to expand our lineup of innovative solutions and make our go-to-market initiatives more effective to provide seamless and borderless services to customers around the globe. By utilizing increased scale, we will be able to further shift our commercial positioning to non-automotive and analog products.

We are currently targeting incremental revenue growth of approximately $200 million, primarily from cross selling and access to fast-growing industries alongside continued innovation of solution offerings, which we are targeting to realize in approximately four to five years after closing. We are also targeting cost savings from operational efficiencies with a targeted financial impact of approximately $125 million, which we are targeting to be realized within approximately three years after closing. Within cost of sales, we believe we will be able to take advantage of benefits of scale in both procurement and distribution, while also being able to reduce corporate expenses, reduce outsourcing and optimize our organizational structures to reduce our selling, general and administrative expenses. Moreover, we expect benefits in reducing our research and development expenses, with various efficiencies of scale in software licensing and other support as well as certain other project efficiencies.

We also anticipate the Dialog Acquisition to be accretive to our earnings per share. On a simple combined basis calculated using our adjusted profit and Dialog's underlying net income, including adjustments for the offering of shares described herein as well as an increase in interest expenses, we estimate that our adjusted EPS would have increased from ¥64.84 to ¥71.33, or approximately 10.0%, for the fiscal year ended December 31, 2020. For additional information about the Dialog Acquisition, our summary pro forma financial information and the simple combined adjusted financial information, see "Proposed Acquisition of Dialog—Unaudited Pro Forma Financial Information."

We will endeavor to implement the initiatives and achieve the long-term financial goals set forth in our mid-term growth strategy.

On February 17, 2020, we announced our mid-term growth strategy and financial model, which established, among other things, certain long-term financial and other targets. We have set a long-term target of achieving sales growth exceeding that of the market through concentrated investment of management resources in the segments on which we are focusing our attention.

These long-term targets are as follows. Note that such targets reflect non-GAAP adjustments to exclude amortization of intangible assets, noncash expenses such as stock-based compensation expenses, acquisition-related costs and one-time expenses:

- adjusted revenue (continuing business only) growth greater than the growth of the SAM (as defined by Renesas);

- achieving an adjusted gross margin (continuing business only) of 50%; and

- achieving an adjusted operating margin (continuing business only) of over 20%.

We have also set out long-term targets for our Industrial/Infrastructure/IoT Business segment, which are as follows:

- adjusted revenue (continuing business only) growth greater than the growth of the SAM (as defined by Renesas);

- achieving an adjusted gross margin (continuing business only) for the segment of 55-60%; and

- achieving an adjusted operating margin (continuing business only) for the segment of 25-30%.

We have also set out long-term targets for our Automotive Business segment, which are as follows:

- adjusted revenue (continuing business only) growth in line with the growth of the SAM (as defined by Renesas);

- achieving an adjusted gross margin (continuing business only) for the segment of 40-45%; and

- achieving an adjusted operating margin (continuing business only) for the segment of 10-15%.

In determining these targets, we have made various important assumptions with respect to the macroeconomic and other general environment as well as the factors that we anticipate will affect our business. In particular, as part of our key assumptions, we have assumed:

- that the current levels of key economic indices would remain generally unchanged;

- a yen/U.S. dollar exchange rate of ¥100 = U.S.$1 and a yen/Euro exchange rate of ¥120 = €1;

- adjustments for our 6" fab shutdown and other structural reform-related EOLs as well as the reclassification of parts of SG&A to cost of sales and R&D expenses;

- that NREs and sales outside of our business units are excluded; and

- that there will be no significant change in the competitive environment, and that no unexpected disruptive technologies in the industries in which we compete will be developed or introduced.

We aim to achieve these targets by optimizing production efficiency, improving our product mix and continuing to realize synergies from the integration of IDT. In addition, we aim to achieve our gross margin target by increases via depreciation, product mix, volume & others and structural reform. In the fiscal year ended December 31, 2020, we achieved adjusted gross margins (continuing business only) of 48%, and expect to be able to achieve our long-term target with continued depreciation and structural reform benefits, despite headwinds from the fire at our Naka plant. These long-term targets do not reflect any of the expected synergies or benefits from our planned acquisition of Dialog, which are described above in "—Our proposed acquisition of Dialog will increase our presence in analog and non-auto markets, which will accelerate our growth and create synergies."

We are aiming to expand into rapidly growing and higher margin areas in the Industrial, Infrastructure and IoT sectors by expanding our product and solution offering capabilities.

Within our Industrial/Infrastructure/IoT Business segment, we are aiming for faster-than-market growth and improvements in our gross margins among our diverse variety of products. We intend to pursue these goals by using our stable and superior current positioning as solid footing for expansion into rapidly growing and higher margin segments within our targeted sectors. Specifically, we intend to use our cutting-edge technology to capture an outsized share of newly developing and rapidly growing areas within these sectors. At the same time, we believe that our acquisitions of Intersil and IDT and the addition of their industry-leading analog solutions to our product line-up, as well as the addition of their existing customer base to ours, will allow us to access and capture revenue in the already large, continuously expanding and higher margin field of analog devices.

We believe that there are a number of inflection points for the Industrial/Infrastructure/IoT Business segment, with new opportunities arising from both data centers and for 5G wireless infrastructure. According to our internal research, new generations of data centers will lead to an increase in the U.S. dollar value of the analog semiconductor contents per DDR5 server of over two times when compared to the prior DDR4 generation, with this growth coming from memory interface and timing products. In addition, we also believe that there are opportunities within both core and edge 5G wireless infrastructure with the potential future shift to Open-RAN 5G architecture and its use of central units and distributed units. For the 4G generation, our SAM is mainly for edge-use application cases. However, under the potential new 5G O-RAN infrastructure, which we believe will gradually replace the legacy systems over time, these core baseband units may be replaced with central units and distributed units that are composed of standard servers and software, which will lead to a new SAM growth opportunity. In addition, we expect a greater increase in the SAM for our edge products that are used in array antennas and remote radio head in the continued transition from 4G to 5G infrastructure.

In addition, we believe that endpoint use cases will also allow us to utilize our leading cloud-native edge computing solutions, such as those with wearable devices. The trend for IoT devices is for cloud computing to utilize big data and analytics to analyze the data that is acquired by sensors in devices, which can be done with our MCU products. In addition, we have recovered from prior market weakness and expanded our strong market positions for both 16-bit and 32-bit MCUs, with a 28% and 9% share for the fiscal year ended December 31, 2020, respectively, according to our internal estimates based on WSTS research. In addition, there has been a shift towards new technology and new products within these sectors, as new product releases and higher performance models have contributed to MCU sales growth for more diversified applications. We plan to continue to take advantage of these trends, as we have expanded our reach to these higher performance models with our open MCU/MPU strategy, wherein we have been diversifying into new end-use applications with our RA ARM and RISC-V products. In addition, we have also greatly expanded the release of our new RA, RL78 and RX lines of products, which increased from 5 products in 2017 to 95 products in 2020. We have also been able to improve our cost competitiveness significantly in recent years, exemplified by the manufacturing cost of one of our popular MCU products being reduced by approximately 45% from 2018 to 2020.

We also plan to utilize a "deeper and broader" strategy for the expansion of our customer coverage. With channel reinforcement, we intend to strategically engage with fewer distributors to strengthen our relationships and engineering support and have reduced the number of our distributors within Japan in recent years from 18 to 8 and from 50 to 34 outside of Japan for our Industrial/Infrastructure/IoT Business segment from the beginning of 2019 to the end of 2020. This concentration of distributors has helped lead to volume discounts by increasing the amount of business per partner and expansion of our customer base. For example, from the fiscal year ended December 31, 2019 to 2020, we achieved an increase in our revenue of 17% for distributors outside of Japan, while revenue decreased by 10% for Japanese distributors and remained virtually unchanged for direct sales. In addition, through the use of catalog distributors, we plan to enhance our e-commerce initiatives for wider customer coverage, which has led to approximately a 1.5 times increase in the number of our new customers from 13,980 in the fiscal year ended December 31, 2019 to 20,560 in the fiscal year ended December 31, 2020. As an example of our strength in e-commerce, we have increased the total number of MCU SKUs for two e-commerce distributors from 482 in the three months ended March 31, 2020 to 1,127 in the three months ended March 31, 2021. Moreover, we plan to continue to increase our web and digital marketing efforts to support our customers online, such as with our Lab on the Cloud platform, Virtual Booth system and our MCU Guide App.

We have been taking advantage of new opportunities within various higher growth areas, such as network time controls, including those utilized in 5G networks and factory automation, pulse oximeters used in various healthcare and fitness devices and low power wireless connectivities, such as those used for smart utility meters, surveillance cameras and street light control. We believe that there is an opportunity to continue to take advantage of the variety of devices that are necessary for these products, with a combination of MPU/MCU, analog and power products all leading to increased revenue opportunities.

We aim to continue to improve our fundamental positioning and improve our leading position within automotive semiconductors to capture further growth opportunities.

As a large contributor to our overall revenue, we aim to continue to enjoy stable revenue from our Automotive Business segment and, in particular, from our base automotive MCU/SoC domain. We also intend to continue to increase our operating margin within this segment and further strengthen our position within our core domain by continuing to pioneer and market industry-leading products that further bolster our strong reputation and customer relationships.

According to Strategy Analytics and LMC Automotive, the U.S. dollar value of the semiconductors used per vehicle is expected to grow at a 6.1% CAGR from $415.8 in 2019 to $593.3 in 2025 with light vehicle unit growth of 2.2% CAGR from 88.9 million units to 101.4 million units for the same period. As a result of these trends, Strategy Analytics forecasts a 8.5% increase in CAGR for total semiconductor demand for light vehicles, growing from $37.0 billion in 2019 to $60.2 billion in 2025. We believe we can use our solid footing within the automotive MCU domain to propel us into advanced MCU applications and to the growing opportunities relating to luxury smart cars and electric vehicles shown by this expected growth.

As a technology leader in process node advancement, we have continued to reap the benefits of our development of 40 nm process MCUs, with growth from approximately ¥38 billion in 2018 to approximately ¥71 billion in 2020, and we believe we can continue to use our technological advantages to win a larger share of design-in opportunities with the upcoming shift to next-generation (28 nm) products as well. In addition, according to our internal estimates based on WSTS research, we have grown our automobile MCU share of supply from 30% for the fiscal year ended December 31, 2018 to 33% for the fiscal year ended December 31, 2020. Moreover, we believe that the scalability and power efficiency of our R-Car platform products are well-suited to next-generation car platforms that contain infotainment and ADAS systems.

In addition, with the advancement of the next generation of automotive solutions, we believe that the importance of software development and collaboration with our OEM and Tier 1 supplier customers is rapidly increasing. As next-generation automobiles continue to be introduced, we have seen a shift from diversified architecture, that are categorized by independent MCUs, to more advanced systems such as domain or zone architecture. These new systems utilize MCUs and SoCs in a hierarchy, which necessitates greater use of high-performance chips and a structure that requires increased compatibility between hardware and software. We plan to take advantage of this shift by providing products that we believe have a higher level of compatible software and hardware IP compared to our competitors and also provide the flexibility to enable agile development, which allows us to collaborate with our customers from the initial stages of development. We believe that we can differentiate ourselves from our competitors and increase our market share by taking advantage of our scalability and by combining the performance advantages of our core MCU/SoC products.

We also plan on using a “deeper and broader” strategy to expand our power and analog products, which we believe will drive future growth. According to Strategy Analytics, there is an expected demand expansion of xEV products from $1,498 million in 2015 to $11,495 million in 2025, representing a 23% expected CAGR. We plan to focus primarily on power devices (such as IGBT products) and battery cell monitor (BMIC) products to capture these market opportunities in the medium term. In addition to MCUs, we believe power and analog devices will grow rapidly, where we have a strong and growing position following our acquisitions of Intersil and IDT and our planned acquisition of Dialog. We have developed a comprehensive product portfolio for xEV system architecture that we believe will allow us to meet the demands of our customers and take advantage of this xEV growth.

Furthermore, we have used our Winning Combinations to focus on specific high-growth opportunities within these areas, such as utilizing MCUs with additional analog/power products for EV battery management, EV inverter management and in-car wireless chargers. For example, the addition of BMICs to our MCU products has led to an increased revenue opportunity of 5.2 times for EV battery management solutions, 3.1 times for EV Inverter Management and 3.8 times for in-car wireless chargers by including new products to our MCUs. We have achieved these winning combinations by utilizing faster time-to-market by reference designs and a variety of ready-to-use solutions, such as using ASIL D compliant system-level solutions and industry-leading measurement accuracy for our EV battery management products. In addition, we believe the integration of Intersil, IDT and Dialog’s products and technology into our product mix will allow us to improve the attractiveness of these Winning Combinations by improving solution cost, functionality, quality and after-sale support.

We will continue to pursue supply chain evolution through multiple initiatives.

We are currently striving to strengthen our supply chain to increase our customers’, business partners’, and our own corporate value. For example, we have also been utilizing more effective methods for our supply chain, such as by utilizing direct shipment methods. By bypassing internal sales companies, we are able to improve our transaction efficiency by changing Incoterms and integrating our business processes while also improving the efficiency of our logistics processes with more optimized warehousing and logistics routes.

In recent years, we have also begun to change the way we receive orders and our approach to inventory management. In the past, production arrangements were heavily based on forecasting, where the customer had no responsibility to pick up the product, which led to an increased risk of losses and unexpected increases in inventory due to fluctuations in the product mix caused by longer production lead times. In response, we have begun to gradually implement our "die-bank" system, which holds inventory in the form of wafers rather than finished products for greater versatility that allows us to respond to customer orders in a timely manner while keeping inventories low. We plan to increase the coverage of our products covered to 100% in future years to this "build-to-order" production system.

We aim to continue to integrate our acquisitions as well as pursue potential new investments while implementing a balanced capital strategy to maximize shareholder value.

For long-term maximization of shareholder value, we intend to take a balanced approach to capital allocation in growth areas, optimization of our capital structure and shareholder returns. In addition to organic growth from our existing initiatives, we will leverage the expertise from our prior acquisitions in evaluating additional acquisition opportunities and seeking other accretive investment opportunities. We are also reducing our fixed costs and operational leverage while taking a pragmatic approach between stock buybacks and dividends.

We regularly evaluate opportunities to bolster our business through strategic acquisitions, such as with our acquisitions of Intersil and IDT and our proposed acquisition of Dialog. In addition to our long-standing collaborations with existing customers, we will continue to seek new strategic partnerships and alliances with third parties in order to supplement product and technological areas that we believe will further enhance the competitiveness of our product offerings.

Our organizational structure provides us with the flexibility and focus to grow our presence in our target segments. We will continue to evaluate our organizational structure and make the appropriate investments and adjustments needed to maximize the implementation of our growth strategies while retaining our core personnel and capitalizing on our cross-product synergies, including building on the gradual accumulation and generation of revenue and cost synergies from our recent acquisitions.

We aim to continue to maintain a disciplined capital allocation policy that balances our core priorities of growth investment (including disciplined capital expenditures and possible strategic acquisitions, which may include the issuance of new shares in connection therewith), financial position management (including maintaining optimal leverage and consciousness of return on equity) and shareholder return (including the possibility of future dividend payments and share buybacks). We also have strong cash flows and the ability to quickly deleverage, which we plan to do in the coming years. As of December 31, 2020, we would have recorded a net debt to adjusted EBITDA ratio of 3.9x on a pro forma basis accounting for the Dialog Acquisition and expect this ratio to decrease on a pro forma basis to 3.1x after this equity offering (calculated based on the offer price of ¥1,174 a share and the number of new shares of Renesas common stock to be issued in the global offering of 182 million, which represents the number of new shares of common stock that will be issued in the global offering, assuming the over-allotment options are not exercised). We are targeting to achieve a net debt / adjusted EBITDA ratio of 1.0x over the next two years or longer. We have calculated the pro forma net debt figures presented above based on the pro forma financial information shown in "Proposed Acquisition of Dialog—Unaudited Pro Forma Financial Information."

The discussion above includes forward-looking statements, such as the anticipated synergies with Dialog, that are based on various assumptions and beliefs, including but not limited to the assumptions set forth above as well as the non-occurrence of the various risks set forth in "Risk Factors—Risks Related to Our Business and Industry" and "Risk Factors—Risks Related to Our Proposed Acquisition of Dialog" and elsewhere in this offering circular. Many of these assumptions and beliefs relate to matters that are outside of our control, including factors affecting the business and economic environment. In addition, there can be no assurance as to our ability to implement our various strategic initiatives. In establishing our long-term financial goals, we did not set or disclose any particular timeframe by which we seek to achieve such goals, and while we will endeavor to achieve such goals as soon as reasonably practicable under the given business environment and other circumstances, we cannot give you any representation or even indication or suggestion about such timeframe at this time. The description of our previous financial targets and results included above should not be used to draw any conclusions with respect to when, or even if, our current long-term financial goals may be *achievable. These and other unanticipated events and circumstances could affect our ability to meet the financial goals set forth above. As a result, we cannot and do not make any representation or assurance as to the achievability of such financial goals or whether our underlying assumptions are appropriate. You should be aware that actual results may vary, potentially materially, from the above forward-looking statements. See "Forward-Looking Statements."*

Company Information

Our registered head office is located at Toyosu Foresia, 2-24, Toyosu 3-chome, Koto-ku, Tokyo 135-0061, Japan. Our main telephone number is +81-3-6773-3000, and our corporate website is http://www.renesas.com. Information appearing on our website is not incorporated by reference into this offering circular.

Summary Risk Factors

Investing in shares of our common stock involves a number of risks, and prospective investors are urged to carefully consider the matters discussed under "Risk Factors" prior to making an investment in shares of our common stock. Such risks include, but are not limited to:

- Adverse global economic conditions could result in a downturn in the markets into which our products are sold as well as in the highly cyclical semiconductor industry in which we operate, which could cause our business, financial condition and results of operations to be materially and adversely affected;
- We face intense competition in the semiconductor industry that may cause us to lose market share and harm our financial performance;
- The COVID-19 pandemic continues to impact our business and could materially adversely affect our financial condition and results of operations;
- A global shortage in the supply of semiconductor chips could have a significant impact on our supply chains;
- Changes in international trade policies and international barriers to trade, or the escalation of trade tensions, may have an adverse effect on our business;
- If we are unable to respond effectively to developments in technology or address the evolving needs of customers and end-product manufacturers, demand for our products could decrease;
- The semiconductor industry is characterized by downward pricing pressure for many of its products;
- We may not be able to successfully implement the initiatives or achieve the long-term financial goals set forth in our mid-term growth strategy;
- We rely on manufacturing capacity located in areas that have been impacted by natural disasters and other disruptions, which could affect the availability of supplies and services to us. Certain natural disasters, such as large earthquakes, flooding or volcanic eruptions in those or other areas, may negatively impact our business;
- We may continue to incur costs and other lost revenue as a result of a fire that occurred in March 2021 at our Naka plant;
- Our results of operations and financial condition could be adversely affected by fluctuations in currency exchange rates and interest rates;
- Our business, financial condition and results of operations may be adversely affected if we are not able to match our manufacturing capacity to demand;
- We have engaged in and may in the future engage in acquisitions, joint ventures, strategic alliances and other transactions intended to complement or expand our business. We may not be able to complete these transactions and, if executed, these transactions could pose major risks and could have a negative effect on our operations;

- We have a substantial amount of borrowings outstanding, which could affect our ability to execute our business strategy, increase our funding costs and limit our ability to attain new financing;

- We may have insufficient cash and cash equivalents and be unable to secure adequate financing for our research and development activities and capital expenditures;

- Failure to adequately protect our technologies and know-how through patents and other intellectual property rights could negatively impact our competitiveness and harm our business and future prospects;

- Our products may be subject to product liability and warranty claims, which could be expensive and could divert management's attention;

- A significant portion of our revenue is to a limited number of customers, and we may suffer if any one of our major customers significantly reduces its purchases from us or defaults on payments to us;

- Delay, reduction or cancellation of orders of products designed to meet a particular customer's specifications may have an adverse effect on our business;

- We are reliant on distributors for the majority of our sales in Japan and the rest of Asia, which could affect our sales in such regions;

- Loss of our key management and other personnel and inability to attract key management and other personnel could impact our business;

- We may not be able to complete the Dialog Acquisition on the expected schedule, or at all;

- Following the Dialog Acquisition, any failure to successfully integrate Dialog's operations with our group could adversely impact our stock price and future business and operations; and

- Other factors discussed in "Risk Factors" and elsewhere in this offering circular.

For a discussion of these and other risks you should consider before making an investment in shares of our common stock, see the section entitled "Risk Factors."

The Global Offering

Global Offering	The total number of shares being offered in the global offering is 336,570,000. The global offering consists of the following concurrent offerings:
International Offering	The international offering consists of 269,256,000 shares, including 145,494,200 newly issued shares and 123,761,800 existing shares to be sold by the selling shareholder named herein. The international shares are being (i) offered by the international managers in offshore transactions outside the United States and Japan in reliance on Regulation S under the U.S. Securities Act and (ii) placed inside the United States through U.S. broker dealer affiliates of the international managers to persons reasonably believed to be qualified institutional buyers in reliance on Rule 144A under the U.S. Securities Act.
Japanese Offering	The Japanese offering consists of 67,314,000 shares, including 36,373,600 newly issued shares and 30,940,400 existing shares to be sold by the selling shareholder in the Japanese offering. The Japanese shares are being offered to the public in Japan by the Japanese underwriters, as described in "Offering and Sale." The closing of the international offering is conditional upon the closing of the Japanese offering, and vice versa.
Over-allotment Options	We have granted the international managers an option to purchase up to an additional 14,549,400 newly issued shares of our common stock in connection with over-allotments, if any, in the international offering. In addition, INCJ has granted the international managers an option to purchase up to an additional 12,376,200 existing shares of our common stock in connection with over-allotments, if any, in the international offering. We have granted Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, an option to purchase up to an additional 3,637,300 newly issued shares of our common stock in connection with over-allotments, if any, in the Japanese offering. In addition, INCJ has granted Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, an option to purchase up to an additional 3,094,000 existing shares of our common stock in connection with over-allotments, if any, in the Japanese offering. See "Offering and Sale."
Offer Price	¥1,174 per share
Joint Global Coordinators	Morgan Stanley & Co. International plc, BofA Securities Japan Co., Ltd., Daiwa Securities Co. Ltd. and JPMorgan Securities Japan Co., Ltd.
International Joint Lead Managers ..	Morgan Stanley & Co. International plc, Merrill Lynch International, Daiwa Capital Markets Europe Limited, J.P. Morgan Securities plc and Citigroup Global Markets Limited
Japanese Joint Lead Managers	Daiwa Securities Co. Ltd., Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., BofA Securities Japan Co., Ltd., JPMorgan Securities Japan Co., Ltd. and Mizuho Securities Co., Ltd.
Selling Shareholder	INCJ is the selling shareholder in both the international offering and the Japanese offering.

Prior to the global offering, INCJ owned 32.15% of the issued and outstanding shares of our common stock as of December 31, 2020. After the global offering, INCJ will own 20.01% of the issued and outstanding shares of our common stock (assuming the over-allotment options are exercised in full).

Use of Proceeds — We estimate that the net proceeds that we will receive from the sale of newly issued shares in the global offering will be approximately ¥208,239 million, or ¥229,185 million if the over-allotment options granted by us are exercised in full, in each case, after deducting estimated underwriting discounts and estimated offering expenses payable by us.

We intend to use the net proceeds from the global offering to fund a portion of the purchase price for the Dialog Acquisition as described in this offering circular, or for partial repayment of the borrowings under the Bridge Facilities Agreement that we undertook for payment of the purchase price for the Dialog Acquisition. We will not receive any proceeds from the sale of existing shares by INCJ, including in connection with the exercise of the over-allotment options granted by INCJ. For further information, see "Use of Proceeds."

Voting Rights — Generally, shareholders of our common stock are entitled to one vote at a shareholders' meeting for each whole "unit" of shares held. Under our articles of incorporation, one unit consists of 100 shares. The record date for determining shareholders who are entitled to vote at our ordinary general meetings of shareholders is December 31 of each year. See "Description of Our Common Stock—Voting Rights."

Lock-up — We have agreed pursuant to a letter agreement with the joint global coordinators to restrictions on the issue, sale and other disposal of shares of our common stock during the period beginning on the date of this offering circular and ending on the date 180 calendar days after the closing date of the global offering, without the prior written consent of the joint global coordinators, subject to certain exceptions.

In addition, INCJ has agreed pursuant to a letter agreement with the joint global coordinators to restrictions on sales and other disposals of our common stock during the period beginning on the date of this offering circular and ending on the date 180 calendar days after the closing date of the global offering, without the prior written consent of the joint global coordinators (which consent in respect of INCJ shall not be unreasonably withheld or delayed), subject to certain exceptions. See "Offering and Sale."

Dividend Policy — We determine the amount of dividends on our shares of common stock for each dividend period upon consideration of various factors, including our consolidated and non-consolidated income surplus, consolidated income, forecast for income for the next period and cash flow status. See "Information Concerning Our Shares—Dividend Policy" and "Description of Our Common Stock—Distribution of Surplus." We have made no dividend payments since the fiscal year ended March 31, 2005.

Withholding Tax — Unless reduced or exempted by an applicable income tax treaty, dividends payable by us to non-residents of Japan or non-Japanese corporations without a permanent establishment in Japan are generally subject to Japanese withholding tax at the rate of (i) 15.315% for dividends to be paid on or before December 31, 2037 and (ii) 15% for dividends to be paid thereafter, except for dividends

	paid to any individual shareholder who holds 3% or more of our total issued shares, for which the applicable rate is 20.42% on or before December 31, 2037 and 20% thereafter. See "Taxation—Japanese Taxation."
Payment and Settlement	Payment for the international shares to be sold by us will be made in yen for value on or about June 15, 2021 (Tokyo time) and payment for the international shares to be sold by INCJ will be made in yen for value on or about June 16, 2021 (Tokyo time). Delivery of the international shares will be made through the book-entry facilities of JASDEC, in Tokyo, on or about June 16, 2021 (Tokyo time). See "Offering and Sale."
Listing	Shares of our common stock are listed on the First Section of the Tokyo Stock Exchange.
Japanese Foreign Exchange Controls	Prior notification to the Minister of Finance and certain other Ministers and an accompanying screening period will be applicable to the acquisition of our shares by certain foreign investors at or above a threshold of 1% of issued shares or total voting rights. See "Japanese Foreign Exchange and Certain Other Regulations—Foreign Exchange Regulations" and "Risk Factors—Risks Related to Our Shares—Prior notification under the Foreign Exchange and Foreign Trade Act of Japan may be required in the case of acquisition by foreign investors of a certain portion of our shares."
Security Codes	Tokyo Stock Exchange Securities Identification Code 6723 ISIN JP3164720009 CUSIP 75972B101 SEDOL 6635677

RISK FACTORS

Prior to making an investment decision, you should carefully consider the following risk factors, along with other matters set forth in this offering circular. These risk factors are not necessarily of equal importance, likelihood of occurrence or duration. Additionally, some risk factors may be related to others, and the occurrence of events described in one risk factor could increase the likelihood of occurrence of events described in others. We and our business, financial condition and results of operations could be materially and adversely affected by the risks described below, and you could lose all or a portion of your investment. This offering circular also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks faced by us described below and elsewhere in this offering circular. See "Forward-Looking Statements." Terms used but not defined in this or prior sections have the meanings given to them in the other sections of this offering circular.

Risks Related to Our Business and Industry

Adverse global economic conditions could result in a downturn in the markets into which our products are sold as well as in the highly cyclical semiconductor industry in which we operate, which could cause our business, financial condition and results of operations to be materially and adversely affected.

Our growth is dependent, in part, on demand for our customers' end products, primarily within the automotive, industrial, infrastructure and IoT sectors. Industry downturns that adversely affect our customers or their customers could adversely affect demand for our customers' end products, which would in turn adversely affect demand for our products. Additionally, global or regional economic slowdowns affecting business and consumer confidence generally could cause demand for semiconductor products to decline. For example, the global economic downturn beginning in 2008 had a significant negative impact on demand for semiconductor products, and a future economic slowdown experienced by one or more significant economies could negatively impact demand for our semiconductor products.

In addition, there are also uncertainties in the global economy due to factors such as the COVID-19 pandemic and geopolitical risks, including the recent presidential transition in the United States potentially resulting in changes to economic policies, continued trade tensions between the United States and China and political instability in the Middle East, Southeast Asia, Mainland China, Hong Kong, Europe, the United States or other regions. Furthermore, international trade disputes may result in increased tariffs, trade barriers, and other protectionist measures that could increase our manufacturing costs, make our products less competitive, reduce consumer demand, or impede or slow the movement of our goods across borders. Increasing protectionism and economic nationalism may lead to further changes in trade policy, domestic sourcing initiatives, or other formal and informal measures that could make it more difficult to sell our products in certain countries. See "—Changes in international trade policies and international barriers to trade, or the escalation of trade tensions, may have an adverse effect on our business" below.

Any of the foregoing could cause or contribute to a broader global economic downturn, which could affect global or regional demand for semiconductor products, which could in turn adversely affect our business, financial condition and results of operations.

Growth in demand in the markets we serve has in the past and may in the future fluctuate significantly based on numerous factors, including:

- worldwide automotive production levels along with semiconductor content per vehicle;
- consumer spending;
- rate and extent of adoption of new or alternative technologies such as advanced driver assistance systems, or ADAS, and systems for autonomous vehicles;
- changes in consumer preferences;
- changes in regulation of products and services provided;
- environmental regulations and economic incentives promoting fuel efficiency and alternative fuel vehicles such as hybrid electric vehicles, or HEVs, and electric vehicles, or EVs;

- availability of tax and other governmental incentives to purchase and operate HEVs and EVs; and
- general economic conditions.

The rate, or extent to which, the industries we serve will grow, if at all, is not guaranteed. In addition, there can be no assurance that particular products within these industries will experience the growth in demand that we expect.

The industries we serve could experience slower growth or a decline in demand, which could have a material negative impact on our business, financial condition and results of operations.

In addition, the semiconductor industry is generally highly cyclical and is subject to constant and rapid technological changes, rapid product obsolescence and price erosion, evolving product and technological standards, short product life-cycles and fluctuations in product supply and demand. The semiconductor industry has experienced significant downturns at various times, often in connection with or in anticipation of maturing product cycles of semiconductor companies and their customers' products, as well as declines in general economic conditions. Downturns are typically characterized by diminished product demand, accelerated erosion of average selling prices, reduced revenues, lower capacity utilization rates and higher inventory levels. We have historically experienced adverse effects on our results of operations and cash flows during such downturns and may experience such adverse effects in future downturns, which could be severe and prolonged. Our ability to reduce costs in periods of downturn through improvements in manufacturing efficiency, reductions in capital expenditures and research and development expenses or other means may be limited because of the need to maintain our competitive position.

We face intense competition in the semiconductor industry that may cause us to lose market share and harm our financial performance.

The semiconductor industry is extremely competitive. We are exposed to competition from rival companies on the basis of product performance, structure, pricing, quality, product features, system-level design capability, engineering expertise, responsiveness, new product innovation, product availability, delivery timing and reliability, customer sales and technical support, product lineup and customized design capability. If we fail to keep pace with the rest of the semiconductor industry, we could lose market share in the markets in which we compete. Any such loss in market share could have a material negative impact on our financial condition and results of operations.

Our competitors range from large, international companies offering a full range of products to smaller companies specializing in particular semiconductor products. Our competitors may have greater financial, technological, personnel and other resources than we have in a particular market or overall. In addition, some competitors may benefit from government policies and support in their home markets, including financial support in the form of tax subsidies or protective judicial or regulatory regimes, such as those in China and the United States.

We expect competition in the markets in which we participate to continue to increase as existing competitors improve or expand their product offerings or as new participants enter our markets, including those participants that had not historically engaged in such markets. For example, semiconductor companies that focus on products for PC- and smartphone-related applications may compete with us more directly if the design of SoCs in automotive systems shifts from the traditional car system navigation system to a system that more closely resembles the system in smartphones. As demand for automotive solutions, including ADAS + automotive infotainment & instruments, has expanded at a faster rate than for semiconductors generally, competitors such as Nvidia Corporation, or Nvidia, Intel Corporation, or Intel, Mobileye N.V. and Qualcomm Technologies, Inc., or Qualcomm, have experienced recent revenue growth rates driven by sales to the automotive industry. These competitors may possess specialized technology or know-how that is particularly advantageous for ADAS + automotive infotainment & instruments products. For example, both Nvidia and NXP Semiconductors N.V., or NXP, have developed platforms to encourage and support automotive OEMs and their direct, or Tier 1, suppliers in the development of autonomous vehicles and ADAS + automotive infotainment & instruments solutions. These platforms directly compete with our R-Car platform solution described in "Business—Principal Products and Applications," and widespread adoption of our competitors' platforms could limit our ability to expand into ADAS + automotive infotainment & instruments applications. More generally, increased competition may result in reduced profitability and reduced sales for us.

Furthermore, consolidation or other strategic partnerships or cooperative arrangements among our competitors may result in increased competition. Certain of our competitors have pursued strategic alternatives such as mergers and other business combinations. For example, in April 2020, Infineon Technologies AG, a provider of various semiconductor solutions, acquired Cypress Semiconductor Corporation, a provider of microcontrollers, connectivity components and other semiconductor products. In July 2020, Analog Devices, Inc., which primarily produces analog semiconductors, announced that they entered into a definitive agreement to acquire Maxim Integrated Products, Inc., which produces signal processing and power management products. In October 2020, Advanced Micro Devices, Inc. announced it will acquire Xilinx Inc. Both companies produce a variety of semiconductors for platforms for cloud, edge and end devices. In December 2020, Nvidia announced that it had signed a transaction with SoftBank to acquire Arm, a semiconductor designer that licenses its semiconductor designs, primarily in the mobile phone space. If we are unable to successfully pursue business strategies that are appropriate in light of these industry developments, we may be unable to compete effectively with such competitors, whose consolidation may allow them to gain improved economies of scale, improve and diversify their product portfolios and increase the size and scope of their offerings. As a result of these shifts in the competitive environment, we may be unable to maintain our current position, and our business, financial condition and results of operations may be adversely affected.

The COVID-19 pandemic continues to impact our business and could materially adversely affect our financial condition and results of operations.

COVID-19 has spread worldwide, resulting in government authorities implementing numerous measures to try to contain the disease, such as travel bans and restrictions, quarantines, shelter-in-place orders and shutdowns. These measures have impacted, and may further impact, our workforce and operations, the operations of our customers and our partners, and those of our distributors and suppliers (including our subcontractors and third-party contract manufacturers). Our critical business operations, most of our finished goods inventory and many of our key suppliers are located in regions which have been impacted by COVID-19. Our customers and suppliers worldwide have also been affected and may continue to be affected by COVID-19 related restrictions and closures.

The COVID-19 pandemic has increased uncertainty regarding the future economic environment and demand levels. It continues to affect our business, and there is uncertainty around its duration and impact. In the fiscal year ended December 31, 2020, our Industrial/Infrastructure/IoT Business segment benefited from stronger demand in data centers and office automation devices for PCs due to increased demands of remote working and remote learning as a result of the COVID-19 pandemic. In this fiscal year, however, in our Automotive Business segment, we saw a decrease in sales owing to the reduction in vehicle production as a result of COVID-19. Additionally, stronger demand globally relating to portions of the semiconductor sector has caused a shortage of certain components in our supply chain as such demand has outpaced supply, which could cause us to order an excess amount if demand changes, pay higher prices, or limit our ability to obtain supply at necessary levels or at all. As the COVID-19 pandemic continues, the timing and overall demand from customers and the availability of the supply chain, logistical services and the component supply may have a material net negative impact on our business and financial results.

The manufacture of product components, the final assembly of our products and other critical operations are concentrated in certain geographic locations, including Japan, China, Malaysia and Taiwan. Each of these countries and locations has been affected by the COVID-19 pandemic and has taken measures to try to contain it, including restrictions on manufacturing facilities, commerce, travel, on our support operations or workforce, or on our customers, partners, vendors and suppliers. There is considerable uncertainty regarding the impact of such measures and potential future measures. Such measures, as well as restrictions or disruptions of transportation, such as reduced availability or increased cost of air transport, port closures and increased border controls or closures, could limit our capacity to meet customer demand and have a material adverse effect on our financial condition and results of operations.

The spread of COVID-19 has caused us to modify certain of our business practices, and we may take further actions as required by government authorities and regulations or that we determine are in the best interests of our employees, customers, partners and suppliers. Work-from-home and other measures introduce additional operational risks, including cybersecurity risks, and have affected the way we conduct our product development, validation, and qualification, customer support, and other activities, which could increase our costs or otherwise have a material adverse effect on our operations. In preparation for these risks, we manage our Business Continuity Plan, or BCP, which helps define our preventive contingency plans; however, such plans may not fully hedge the risks from events that we could not anticipate as a result of the COVID-19 pandemic.

While certain COVID-19 vaccines have been approved and have become available for use in the United States and certain other countries, we are unable to predict when those vaccines will become widely available in Japan and elsewhere, how widely utilized the vaccines will be, whether they will be effective in preventing the spread of COVID-19, and when or if normal economic activity and business operations will resume.

The ultimate impact of the COVID-19 pandemic or a similar health epidemic is highly uncertain and subject to change. The extent of the impact of the COVID-19 pandemic on our operational and financial performance, including our ability to execute our business strategies and initiatives in the expected time frame, will depend on future developments, including, but not limited to, the duration and continued spread of the COVID-19 pandemic, its severity, the actions to contain the disease or treat its impact, availability of vaccines or other treatments, further related restrictions on travel, and the duration, timing and severity of the impact on customer spending, including any resulting recession, all of which are uncertain and cannot be predicted. An extended period of global supply chain and economic disruption as a result of the COVID-19 pandemic could have a material negative impact on our business, results of operations, access to sources of liquidity and financial condition, though the full extent and duration is uncertain.

The impact of COVID-19 can also exacerbate other risks discussed in this "Risk Factors" section and throughout this offering circular, which could in turn have a material adverse effect on us. Developments related to COVID-19 have been unpredictable, and additional impacts and risks may arise that we are not aware of or able to respond to appropriately.

A global shortage in the supply of semiconductor chips could have a significant impact on our supply chains.

The semiconductor industry has been facing significant global supply chain issues as a result of the impact of the COVID-19 pandemic, shifts in demand and supply, supply chain shortages due in part to political and trade tensions, and other disruptions. In recent months, the semiconductor industry has been characterized by significant product shortages as strong demand has outstripped supply due in part to the increased demand from recovery trends following the COVID-19 pandemic, particularly within the automotive sector. In addition, the industry has seen supply restrictions due to the introduction of various Chinese entities to the U.S. Entity List and the subsequent shift from Chinese to Taiwanese foundry suppliers as described in more detail in the immediately following risk factor. Moreover, certain adverse weather and other events have also impacted the global supply chain, such as the fire at Asahi Kasei Microdevices Corporation in November 2020, the winter cold snap within the United States that halted the production at several semiconductor companies located in Texas in February 2021 and the fire at our Naka plant in March 2021. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Factors Affecting Results of Operations—March 2021 Fire at our Naka Plant."

As a result of the above, among other factors, the semiconductor industry is currently experiencing significant shortages of capacity, which has resulted in a lengthening of the delivery lead times for our products. Numerous factors, such as the ongoing COVID-19 pandemic or further trade tensions between the United States and China, may prolong or deepen these challenges faced by the industry. If this capacity shortage continues for an extended period of time, we may be unable to continue procuring adequate foundry capacity from our third-party manufacturers and third-party back-end manufacturers or adequately secure raw materials and other supplies necessary for the production of our products. As a result, this supply shortage could limit the volume of products we can produce, delay production of new products or negatively impact our ability to meet our customer's demand for our products. In addition, this shortage could also lead to industry-wide disruptions that may be difficult to predict or foresee, including potential impacts on the semiconductor industry broadly or on our business as a whole. Any of the foregoing could negatively impact our business and results of operations.

Changes in international trade policies and international barriers to trade, or the escalation of trade tensions, may have an adverse effect on our business.

Since 2018, there have been political and trade tensions among a number of the world's major economies. These tensions have resulted in the implementation of tariffs and non-tariff trade barriers and sanctions, including the use of export control restrictions and sanctions against certain countries and individual companies. In particular, trade tensions between the United States and China have resulted in significant tariff increases, sanctions against specified entities, and the broadening of restrictions and license requirements for specified uses of products. The ongoing geopolitical and economic uncertainty between the United States and China, and the unknown impact of current and future United States and Chinese trade regulations, may cause disruptions in the semiconductor industry and its supply chain or other disruptions which may, directly or indirectly, materially harm our business, financial condition and results of operations.

These trade barriers have been particularly impactful to the semiconductor industry and related markets. Prolonged or increased use of trade barriers may result in a decrease in the growth of the global economy and semiconductor industry, and could cause turmoil in global markets that result in declines in electronic products sales from which we generate our income through our products and services. Also, any increase in the use of export control restrictions to target certain countries and companies, any expansion of the extraterritorial jurisdiction of export control laws, or complete or partial ban on semiconductor product sales to specified companies could impact not only our ability to continue supplying products to those customers, but also our customers' demand for our products, and could lead to changes in semiconductor supply chains.

For example, the Bureau of Industry and Security of the U.S. Department of Commerce, or BIS, recently has imposed and may continue to impose additional restrictions, including licensing requirements, under the Export Administration Regulations, or EAR, with respect to certain Chinese companies that impact the supply of U.S. products and certain non-U.S. products incorporating U.S. content, or that are manufactured using certain U.S. technology or software, to such companies and the sourcing of U.S. items by non-U.S. companies for use in manufacturing products for such companies. BIS has recently added a number of Chinese entities to the Entity List under the EAR. For example, in May 2020 and again in August 2020, the United States tightened its export control measures against Huawei Technology Co. Ltd. and its affiliates, including an expanded license requirement for providing items subject to the U.S. export control jurisdiction. Moreover, in December 2020, Semiconductor Manufacturing International Corporation, or SMIC, one of the largest chip manufacturers in China, was added to the Entity List. Challenges faced by SMIC and its key suppliers as a result of the listing have had impacts across the global semiconductor supply chain and have helped lead, in part, to the global semiconductor shortage.

Moreover, as a result of recent global semiconductor shortages and trade tensions described above, certain countries have recently taken an enhanced policy focus on the semiconductor industry in particular. For example, the United States recently enacted the CHIPS for America Act, which provides various investment tax credits and other government funding for domestic semiconductor manufacturing and research companies.

While tariffs and other retaliatory trade measures imposed by other countries on U.S. goods have not yet had a significant impact on our business or results of operations, we cannot predict future developments, and such existing or future tariffs and measures could have a material adverse effect on our consolidated results of operations, financial position and cash flows. Further changes in U.S. trade policy could trigger retaliatory actions by affected countries, which could impose restrictions on our ability to do business in or with affected countries or prohibit, reduce or discourage purchases of our products by certain overseas customers or could result in weaker price competitiveness for our products in foreign countries. For example, there are risks that the Chinese government may, among other things, require the use of local suppliers, compel companies that do business in China to partner with local companies to conduct business and provide incentives to government-backed local customers to buy from local suppliers. Changes in, and responses to, U.S. trade policies, such as the recent policies to encourage domestic semiconductor manufacturing, could reduce the competitiveness of our products and cause our sales and revenues to drop, which could materially and adversely impact our business and results of operations.

If we are unable to respond effectively to developments in technology or address the evolving needs of customers and end-product manufacturers, demand for our products could decrease.

We engage in continuous research and development to improve our existing products and technologies, enhance our manufacturing processes and develop new products. The markets for most of our products are characterized by continuous technological development, and our customers' requirements regarding the performance of our products are expected to continue to become stricter over time. In such markets, our ability to develop new products to meet evolving customer requirements is a critical factor to the success of our business. Technologies, standards or manufacturing processes may change during development, potentially rendering our products outdated or uncompetitive even before their introduction. Our ability to develop products and related technologies to meet evolving customer requirements and at prices acceptable to our customers are major factors in determining our competitiveness. If any of our competitors develops new technologies or products that are more attractive to our customers, our products could be rendered obsolete or demand for our products could decrease. Similarly, end products may evolve or be replaced by other new types of end products in a manner that reduces the need to use our products as components and materials. For example, we expect that the automobile industry will gradually shift away from the use of individual MCUs to more integrated and scalable solutions, such as domain control and gateway products, and greater emphasis on agile software development. Anticipating such shifts accurately and developing products that will meet our customers' evolving requirements in a timely manner present a significant challenge. If we are unable to keep pace with changes in technology or successfully develop new products, our market share or revenue could decrease and our business could be adversely affected. In addition, we could lose market share to new entrants that adapt more quickly to changes in technology.

The semiconductor industry is characterized by downward pricing pressure for many of its products.

Due to the rapid innovation that is exhibited by, and strong downward pricing pressure from end product manufacturers and their Tier 1 suppliers in, the markets in which we compete, substantially all of our products are subject to constant and significant price erosion over the course of their product lives, which are in many cases relatively short. The speed and timeframe of such price erosion vary based on product type, with automobile-related products experiencing more gradual erosion compared to those relating to PCs, smartphones and consumer products, which have comparatively shorter product cycles. Pricing pressure is particularly intense on products containing older technology, which we may be unable to cease production of either due to contractual obligations or for customer relationship reasons in light of how it is often difficult and time-consuming for customers to secure alternative suppliers. If we are unable to achieve successful outcomes in price renegotiations and/or reduce our production costs for such products through improvements in process technologies, yield levels and other production efficiencies to a degree sufficient to maintain sufficient margins, we will not be able to make a profit from the sale of these products. Furthermore, if we are unable to continue to successfully introduce new advanced products that are able to command higher margins, or if we are unable to phase out production of certain legacy products that generate comparatively low margins due to our inability to effectively manage customer demand for such products, we could experience a decline in our margins that materially and negatively impacts our business, financial condition and results of operations.

We may not be able to successfully implement the initiatives or achieve the long-term financial goals set forth in our mid-term growth strategy.

In February 2020, we set out our original mid-term growth strategy with a new set of long-term financial goals. The new mid-term growth strategy sets forth our medium-term strategic initiatives and long-term financial goals designed to support consistent and sustainable growth. We have a number of challenges in executing our strategy, including the risks set forth in "—Risks Related to Our Business and Industry." It is possible that some of those strategies may become difficult to implement and others may not achieve the originally planned results due to changes in economic conditions and the business environment, contractual obligations, the need to maintain customer relationships and currently unforeseeable factors. In addition, we have made various assumptions in our mid-term growth strategy, including with respect to future economic conditions in Japan and in the foreign countries in which we operate and in which our clients are located, future growth in the size of the segments that we serve and future currency exchange rates. There can be no guarantee that these or other assumptions made by us will prove to be correct, and we may be unable to compensate for the effect of inaccurate assumptions. For a more detailed discussion of the assumptions underlying our mid-term growth strategy, see "Business—Our Strategies—We will endeavor to implement the initiatives and achieve the long-term financial goals set forth in our mid-term growth strategy." As a result, there can be no assurance that we will be successful in implementing the strategic initiatives or achieving the long-term financial goals set forth in our mid-term growth strategy.

We rely on manufacturing capacity located in areas that have been impacted by natural disasters and other disruptions, which could affect the availability of supplies and services to us. Certain natural disasters, such as large earthquakes, flooding or volcanic eruptions in those or other areas, may negatively impact our business.

We rely on internal manufacturing capacity, wafer fabrication foundries, logistics providers and other suppliers and sub-contractors in Japan and areas around the world which have been impacted by natural disasters and other disruptions. If a large earthquake, tsunami, storm, flood, volcanic eruption or other natural disaster, accident (such as a fire or power outage), war, act of terrorism, blackout, security breach or other event such as the failure of our computer and related systems, were to directly damage, destroy or disrupt our manufacturing facilities or those of our providers, subcontractors or suppliers, it could disrupt our operations, delay new production and shipments of existing inventory or result in costly repairs, replacements or other costs, all of which could result in significant losses. We may also be forced to move production to another manufacturing facility, which could result in additional production delays and unanticipated costs due to product requalification requirements, required modifications to the new facility to support production or other production challenges resulting from the transition.

For example, Japan has historically experienced numerous earthquakes and other natural disasters, including typhoons, tsunamis and volcanic eruptions, that have caused extensive damage to property and disruption to commerce, including the Great East Japan Earthquake in 2011, which damaged our Naka plant in Hitachinaka and led to temporary shutdowns of our Naka plant and a number of our other manufacturing facilities. Even if our manufacturing facilities are not significantly damaged, a large earthquake, typhoon or other natural disaster, accident or other event in Japan or elsewhere could result in significant disruptions in our supply of water or electricity or in our distribution channels or supply chains, any of which could lead to delays in new production or shipments of existing inventory, particularly if we are unable to quickly and effectively seek alternative distributors or source our components from unaffected suppliers. Furthermore, not all potential losses are insured. Even if losses are covered by insurance, the coverage may not be adequate or the claim may be subject to challenges or other delays in payment.

We have a BCP that sets forth countermeasures in the event of a natural disaster. We also carry insurance to cover property damage and business interruption for protection of certain potential losses at our production facilities. However, our BCP may not be successfully implemented, and our insurance policies may not be adequate to cover all possible losses and expenses. For example, although we have insurance to cover earthquake damage, the total coverage amount is limited and, depending on the extent of any damage, may not be adequate to cover all the losses resulting from an earthquake.

We may continue to incur costs and other lost revenue as a result of a fire that occurred in March 2021 at our Naka plant.

In addition to natural disasters, we have in the past experienced accidents that have damaged our facilities and led to shutdowns of production at our facilities. For example, in March 2021, a fire occurred at our Naka plant, which caused our production and the shipment of products at the plant to cease. As a result of the fire, we incurred restoration, repair and other costs that impacted our results for the three months ended March 31, 2021, and the total amount of damages that we will incur as a result of this plant fire may differ from our estimated forecast, including for the six months ending June 30, 2021. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Outlook for the Six Months Ending June 30, 2021." As a result, in future periods, our business, results of operations and financial condition could be materially adversely affected by, among other things, the costs to restore damaged facilities and equipment, a decrease in revenue and operating profit due to a decrease in plant utilization or other stoppages, and a deterioration in gross margins. In addition, although we expect that our insurance policies may cover a substantial portion of our losses from this fire, we remain in negotiations with our insurers and such policies may not be adequate to cover the majority of our losses and expenses as a result. Moreover, any payments that we receive from our insurers will not be immediate and may take a year or more to receive, and we may also suffer from reputational risk, a decrease in our sales or a reduction in our market share as a result of this fire. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Factors Affecting Results of Operations—March 2021 Fire at our Naka Plant."

Our results of operations and financial condition could be adversely affected by fluctuations in currency exchange rates and interest rates.

There has been considerable volatility in foreign exchange rates in recent years, including rates between the Japanese yen and the U.S. dollar. While our sales from customers outside Japan are denominated mostly in U.S. dollars, the amount of our costs denominated in U.S. dollars is less than our U.S. dollar sales, and the rest of our costs are denominated mostly in Japanese yen. As a result, changes in yen-dollar exchange rates will affect our operating results and could lead to exchange losses. If the Japanese yen were to appreciate against the U.S. dollar, our sales could decrease significantly without a significant decrease in costs and this would have a material adverse effect on our business and results of operations. For more information about our exchange rate risk, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Factors Affecting Results of Operations—Currency Exchange Fluctuations."

In addition, foreign currency-denominated assets and liabilities are reported in the relevant local currencies and then translated to yen, and the financial statements of our foreign subsidiaries are also translated from the relevant local currencies into yen, which may cause consolidated assets, liabilities, income and expenses to fluctuate.

We engage in and may in the future continue to engage in hedging transactions and other arrangements to mitigate exchange rate risk, but there can be no assurance that such arrangements will be sufficient to protect us against the effects of adverse movements in foreign exchange rates.

As we finance a portion of our operations through loans from banks and other financial institutions, increases in interest rates could substantially increase our financing costs. Interest rates on Japanese yen-denominated liabilities are currently at historical lows, but there can be no assurance that the current interest rate environment will continue. Changes in interest rates could cause our cost of operations, assets and liabilities to fluctuate. As of March 31, 2021, we had ¥671.1 billion of interest-bearing liabilities, including bonds and borrowings and lease liabilities, which is an amount equivalent to 39.8% of our total assets. As of the same date, all of our borrowings carried floating interest rates, which fluctuate based on market interest rates, and all of our total borrowings were denominated in yen.

Our business, financial condition and results of operations may be adversely affected if we are not able to match our manufacturing capacity to demand.

Due to the cyclicality and volatility of the semiconductor industry, it is difficult to predict future trends in the markets we serve. This makes it difficult to estimate production capacity requirements, particularly due to the significant lead times inherent in developing manufacturing capacity. In addition, if manufacturing capacity is reduced or eliminated at one or more facilities, including as a response to the recent worldwide semiconductor shortage, or by an accident or stoppage at a facility, such as occurred recently at our Naka plant, we could experience various manufacturing capacity mismatches that could lead to product shortages, production delays, quality assurance problems, increased manufacturing costs, and/or supply chain disruptions. All of this could ultimately lead to a decrease in the volume of sales of our products, harm our reputation and competitive position, cause a deterioration of the relationships with our customers and materially harm our revenues.

On the other hand, if demand is lower than our expectations, we risk underutilization of our facilities, which could lead to excess inventory levels or lower margins. In addition, if changes in the economic environment lead to an excess of supply over demand for our products, and as a result we are unable to meet our sales expectations due to declines in unit sales volumes and/or sales price levels, we may be unable to recover our capital expenditures or other investments, in part or in full, or such recovery may take longer than what our expectations were when we made the relevant decision to invest. These effects could be compounded if demand declines after we have made investments in our manufacturing capacity in order to meet a demand upswing.

We have engaged in and may in the future engage in acquisitions, joint ventures, strategic alliances and other transactions intended to complement or expand our business. We may not be able to complete these transactions and, if executed, these transactions could pose major risks and could have a negative effect on our operations.

In February 2017, we consummated the acquisition of Intersil, and in March 2019, we consummated the acquisition of IDT. As described in "—Risks Related to Our Proposed Acquisition of Dialog" below, we announced in February 2021 an agreement with Dialog on the terms of a recommended cash offer for us to acquire Dialog. We periodically pursue acquisitions for a number of reasons, including expanding into new areas of business, complementing existing lines of business, adding research and development capabilities or pursuing other synergies. The pursuit of these acquisitions requires the commitment of significant management and capital resources in various stages, from the exploration of potential acquisition targets to the negotiation and execution of an acquisition to the integration of an acquired business into our own. The required commitment of time and resources may divert the attention of management or capital or other resources away from our day-to-day business. Moreover, we may not be able to recoup the investment of capital or other resources through the successful integration of acquired businesses, including the realization of any expected cost or other synergies. Specifically, we may encounter the following risks and difficulties:

- we may face significant challenges in combining acquired companies' infrastructure, management and information technology systems with ours;
- our management's focus on the integration could result in distraction from other operating objectives and negative impacts on our operating results during the integration process;
- our inability to achieve the intended objectives of the transaction;
- there may be difficulties in conforming standards, controls, procedures and accounting and other policies, as well as business cultures and compensation structures;
- we may be unable to obtain required legal, regulatory or antitrust consents, clearances or approvals and, in particular, we may be subject to increased scrutiny from competition, antitrust or national

security regulators as a result of increased regulatory and political pressures on the semiconductor industry;

- unanticipated impediments to the realization of synergies may come to light during the integration process and delay or prevent us from realizing such synergies;

- we may not be able to retain key customers of the acquired companies; or

- we may not be able to retain key personnel at the acquired companies.

In addition, our future success may be dependent on whether we can acquire other businesses or technologies or enter into joint ventures or strategic alliances that could complement, enhance or expand our current business or products or that we believe might otherwise offer us growth opportunities. We regularly evaluate potential acquisitions, joint ventures and other strategic transactions, some of which are large in size or otherwise substantial. If we are unable to identify suitable targets, our growth prospects may suffer and we may not be able to realize sufficient scale advantages to compete effectively in all segments. In addition, in pursuing acquisitions, we may face competition from other companies in the semiconductor industry. Our ability to acquire targets may also be limited by applicable antitrust and national security laws and other regulations in Japan, the United States, the European Union and other jurisdictions in which we do business. In addition, we may not be able to complete such transactions due to a failure to secure financing. Moreover, if the contemplated acquisition or other transaction is particularly large in size and we are unable to finance the transaction through available cash or debt alone or to maintain the appropriate level of financial strength, we may issue and sell additional shares, including the use of equity as consideration, resulting in purchasers of shares in the global offering and our existing shareholders experiencing dilution and its negative effects on our share price.

In addition, to the extent that we are successful in making acquisitions or entering into strategic alliances, we may need to expend substantial amounts of cash, incur debt, assume loss-making divisions and incur other types of expenses, and it is not certain that corporate acquisitions and strategic alliances would actually yield the results we initially anticipated. We may also assume unexpected contingent or other liabilities, or be required to mark up the fair value of liabilities (or mark down the fair value of assets) acquired upon the close of, or in connection with, an acquisition. We may not be able to successfully or profitably integrate, operate, maintain and manage our newly acquired operations or employees. We may not be able to maintain uniform standards, controls, procedures and policies, and this may lead to operational inefficiencies. We also may not be able to sustain such strategic alliances due to disagreements with our partners relating to capital procurement, technology management and product development, or financial or other business issues faced by our partners. As a result of any of the foregoing factors, we may be unable to achieve our strategic goals and our results of operations may be adversely affected.

Furthermore, any acquisition may result in our recording significant amounts of goodwill. Goodwill is recognized on our consolidated statement of financial position on the acquisition date. Under IFRS, whenever events or changes in circumstances indicate that goodwill may be impaired, we are required to perform an impairment test to determine whether such goodwill has become impaired, and we are also required to conduct an impairment test every year with regard to goodwill and other intangible assets with an indefinite useful life, regardless of any such indication. The recognition of such impairment charges may adversely affect our business, financial condition and results of operations. As of December 31, 2020, we had ¥590,459 million in goodwill and we expect to recognize substantial goodwill as a result of our planned acquisition of Dialog. In addition, we may record additional goodwill in connection with any future acquisitions. See "Risk Factors—Risks Related to Our Business and Industry—We may have to recognize additional charges on our consolidated statements of profit or loss due to impairment of goodwill and other intangible assets."

We have a substantial amount of borrowings outstanding, which could affect our ability to execute our business strategy, increase our funding costs and limit our ability to attain new financing.

As of March 31, 2021, we had ¥671.1 billion in aggregate principal amount of interest-bearing liabilities, including bonds and borrowings and lease liabilities. Our high level of debt could have important consequences. For example, it could:

- divert substantial cash flows away from investments and expenditures related to our operations and future business opportunities as a result of debt service obligations;

- limit our ability to obtain additional financing from the debt capital markets or from commercial banks, including to replace maturing interest-bearing liabilities;

- make us more vulnerable to downturns in general economic conditions;

- limit our ability to pursue strategic acquisitions of businesses and technologies; or

- place us at a possible competitive disadvantage compared to less-leveraged competitors and competitors that have better access to capital resources.

In addition, we entered into a bridge facilities agreement with MUFG Bank, Ltd. and Mizuho Bank, Ltd. for up to ¥735.4 billion in February 2021 (the "Bridge Facilities Agreement") to finance a portion of the funds required for the Dialog Acquisition, the funding of which we expect to occur at the time of the closing of the Dialog Acquisition. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Bridge Facilities Agreement." We also intend to use the net proceeds from this offering to fund a portion of the purchase price of the Dialog Acquisition instead of a portion of the funding through this Bridge Facilities Agreement. Although we plan to refinance this loan to various longer-term financings, we will still incur a significant amount of interest-bearing liabilities as a result of the financing for the Dialog Acquisition. As a result, if our expected cash flow generation or re-financings are not realized, our financial condition will deteriorate and our credit ratings may be lowered, which may also increase our funding costs or constrain our ability to finance our operations and in addition, the significant amount of our interest-bearing liabilities may increase the amount of cash required for payments of interest and principal, which could adversely affect our results of operations.

As of the date of this offering circular, our long-term credit ratings are BBB- by S&P Global Ratings Japan Inc. and BBB- by Fitch Ratings Japan Ltd. and we have also been placed on credit watch negative from S&P Global Ratings Japan Inc. and rating watch negative from Fitch Ratings Japan Ltd. after our announcement of the Dialog Acquisition.

In addition, we may also be unable to successfully meet our goals for deleveraging after the Dialog Acquisition. As described in more detail in "Business—Our Strategies—We aim to continue to integrate our acquisitions as well as pursue potential new investments while implementing a balanced capital strategy to maximize shareholder value," we aim to decrease our leverage following the Dialog Acquisition. However, we may not be able to meet these deleveraging goals if we are unable to sufficiently decrease our overall indebtedness, or if we are unable to achieve sufficient increases in earnings to offset our increased levels of debt.

Moreover, a portion of our debt is subject to certain financial covenants as set forth in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources." Any failure to comply with the covenants could result in the acceleration of the maturity of our outstanding indebtedness, which would have a material adverse effect on our financial condition.

We may have insufficient cash and cash equivalents and be unable to secure adequate financing for our research and development activities and capital expenditures.

Our businesses require continued investments in research and development for new technologies and products, as well as significant capital expenditures in facilities and equipment to support production capacity. We seek to finance our research and development activities and capital expenditures primarily through cash flows from operations. We also require capital to implement our business and investment plans, acquire technology and services and finance outstanding debt. We may consider alternative sources of financing, including borrowing from financial institutions and the issuance of debt securities, depending on our capital needs and market conditions. However, there can be no assurance that we will be able to obtain financing when necessary on terms acceptable to us or at all to meet our future capital needs. A decrease in our cash and cash equivalents could cause us to be unable to make capital expenditures at the timing or to the extent we require or consider desirable, and could cause us to forego making such expenditures or be forced to seek alternative financing arrangements that may be on unfavorable terms.

Factors that could negatively affect the terms and availability of financing include future disruptions in global financial markets, downturns in the semiconductor industry or any of the applications that incorporate our products, changes in the lending policies of institutions on whom we rely or any real or perceived decline in our creditworthiness. Any such factors may force us to enter into financing arrangements on unfavorable terms or abandon some of our financing plans, which could result in increased financing costs or our inability to implement planned capital expenditures or research and development projects in the anticipated time frame.

Failure to adequately protect our technologies and know-how through patents and other intellectual property rights could negatively impact our competitiveness and harm our business and future prospects.

Our ability to compete in the semiconductor industry depends heavily on our technologies and know-how. We commit significant resources to secure protection for such technologies and know-how through patents and other forms of intellectual property rights, and to prevent dissemination of unpatented trade secrets and other proprietary information, including by entering into confidentiality agreements with our employees and controlling access to our offices and facilities. However, there can be no assurance that the measures we are taking will effectively deter competitors from improper use of our intellectual property, particularly in countries and areas where intellectual property may not be adequately protected. Our competitors may misappropriate our intellectual property, or our intellectual property may become known or independently developed by our competitors. In addition, disputes may arise concerning the ownership of our intellectual property or the applicability or enforceability of our confidentiality agreements, and there can be no assurance that any such disputes would be resolved in our favor. Even if we are successful in any such disputes, we cannot be certain that we will have adequate remedies for any such breach. Any failure to protect our intellectual property could negatively impact our competitiveness and adversely affect our business and future prospects.

We may be accused of infringing the intellectual property rights of others.

Due to the existence of a large number of patents in our field and the rapid rate of issuance of new patents, we may be unintentionally using technology that is the subject of an issued patent or a patent application that has not yet been publicly disclosed. Certain of our products have in the past been found to infringe on the patents of third parties, and we cannot assure you that third parties will not assert intellectual property infringement claims against us or that such claims will not be successful. See “Business—Legal Proceedings.” Even if such claims are not successful, a filing of an infringement claim against us could result in a significant investment of time and effort on the part of our management, increased legal expenses, damage to our reputation and other costs, any or all of which could have a material adverse effect on our business, financial condition and results of operations.

We rely on technology provided by third parties, and our business may be negatively affected if we are unable to renew our existing licensing arrangements, obtain future license arrangements or become subject to disputes or experience other negative consequences relating to existing or future licensing arrangements.

We have entered into licenses for the use of technologies implemented in our semiconductors and manufacturing processes. If we are unable to renew our existing technology licensing arrangements to produce our products or implement our manufacturing processes on acceptable terms, or if such arrangements are terminated for any reason, we may lose the legal protection to manufacture certain of our products or to use certain of the processes we employ to manufacture our products, which may prevent us from manufacturing and selling certain of our products. We could also be at a disadvantage if our competitors obtain licenses for protected technologies on more favorable terms than we do. In the future, we may also need to obtain additional patent licenses for new or existing technologies. We cannot provide assurance that these license agreements can be obtained or renewed on acceptable terms or at all, and if not, our business and operating results could be adversely affected. In addition, if a licensee of our intellectual property were to be acquired by an unlicensed third party, such third party may obtain access to our intellectual property, which could reduce the value of such intellectual property. Alternatively, a business combination or partnership between us and a third party could result in our business becoming subject to new restrictions under license agreements of such third party, the resolution of which could require us to pay compensation to a third party, result in infringement or other claims relating to existing license agreements with a third party, or force us to terminate or modify our planned business combination or partnership.

We also generally compensate our employees for innovations that they make in the course of their employment pursuant to a patent reward program. However, we could face legal action by an employee who considers such compensation inadequate.

If our manufacturing process is delayed or disrupted, our business, financial condition and results of operations could be materially and adversely affected.

The technology and processes we use for the manufacture of our products are highly sophisticated, and our manufacturing yields and product performance characteristics can be negatively affected by contamination from particles of foreign matter or by other causes. There is always a risk that, from time to time, there will be production difficulties that will result in delivery delays or disruptions in our production activities. If production at our manufacturing facilities is significantly delayed or disrupted, we may not be able to adequately compensate for the decrease in production levels. Additionally, other events including political or public health crises, such as an outbreak of contagious diseases like COVID-19, SARS-CoV, avian and swine influenza, measles, or Ebola, may affect our production capabilities or that of our suppliers, including as a result of quarantines, closures of production facilities, lack of supplies, or delays caused by restrictions on travel or shipping. For example, in March 2021, a fire occurred at our Naka plant, which caused our production and the shipment of products at the plant to significantly decrease for a period of time. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Factors Affecting Results of Operations—March 2021 Fire at our Naka Plant." In the event of such delays or disruptions, our customers could decide to purchase products from our competitors, which would result in a reduction in revenue and a deterioration of our customer relationships, or our production costs could increase, all of which could materially and adversely affect our business, financial condition and results of operations.

We outsource a portion of our manufacturing activities to third-party contract manufacturers. If our production or manufacturing capacity at one of these third-party facilities is delayed, interrupted or eliminated, we may not be able to satisfy customer demand.

We continue to expand our outsourcing arrangements for the manufacture, test and assembly of many of our products. Our outsourced wafer fabrication is consolidated with a limited number of suppliers, making us highly reliant on such suppliers. The ability and willingness of third-party contract manufacturers to perform is largely outside of our control. If one or more of our third-party contract manufacturers fails to perform its obligations in a timely manner or at satisfactory quality levels, our ability to market products and our reputation could suffer. If production or manufacturing capacity is delayed, reduced or eliminated at one or more of these facilities, the overall manufacturing process could be disrupted, which could lead to difficulties or delays in fulfilling our customer orders, particularly amid periods of high product demand, and which could in turn cause our revenue to decline, especially for certain advanced technologies that we are not capable of manufacturing internally.

The ability of our third-party contract manufacturers to provide us with products is limited by their available capacity, existing obligations and technological capabilities. For example, as a result of increased global demand for semiconductors and semiconductor-related components, foundries have experienced capacity shortages and have responded by allocating existing supply among their customers, including us. This capacity shortage has resulted in supply shortages across the globe, and availability of capacity at our primary third-party contract manufacturers, such as Taiwan Semiconductor Manufacturing Company Limited, or TSMC, has been tightening recently. As a result, capacity from third-party contract manufacturers may not be available when we need it or at reasonable prices, which could limit the volume of products we can produce and/or delay production of new products, both of which would negatively impact our business and operations. If these conditions continue for a substantial period or worsen, our ability to meet our anticipated demand for our solutions could be impacted which, in turn, could negatively impact our business, operations and financial results.

In addition, a key part of our current strategy is expanding our use of third-party contract manufacturers with respect to advanced design nodes, and delays or interruptions in those foundries' manufacturing processes could adversely affect our ability to supply many of our products. If a third-party contract manufacturer fails to deliver quality products on time and at reasonable prices, we could face these same challenges. In addition, some parts may not be readily available from alternate suppliers due to their particular design or specifications. If one of our suppliers, particularly a sole-source supplier, ceases to, or is unable to, manufacture such a component or supply is otherwise constrained, for example as a result of a natural disaster or export controls, it may be difficult for us to transition the manufacture of that component to another third-party contract manufacturer or source alternative parts, we may be forced to re-engineer a product and we may fail to timely meet customer demand.

As a result, our business, financial condition and results of operations could be adversely affected.

To the extent we rely on alliances and third-party design and/or manufacturing relationships, we face the following risks:

- reduced control over delivery schedules and product costs;
- manufacturing costs that are higher than anticipated;
- inability of our manufacturing partners to develop manufacturing methods and technology appropriate for our products and their unwillingness to devote adequate capacity to produce our products;
- decline in product reliability;
- inability to maintain continuing relationships with our suppliers; and
- restricted ability to meet customer demand when faced with product shortages.

In addition, purchasing, rather than manufacturing, these products may adversely affect our gross margin if the purchase costs of these products become higher than our own manufacturing costs would have been. Our internal manufacturing costs include depreciation and other fixed costs, while prices for outsourced products are based on market conditions. Prices for external foundry products also vary depending on capacity utilization rates at our suppliers, quantities demanded, product technology and geometry. Furthermore, these outsourcing costs can vary materially from quarter-to-quarter and, in cases of industry shortages, can increase drastically, negatively impacting our gross margin.

If any of these risks are realized, we could experience an interruption in our supply chain or an increase in costs, which could delay or decrease our revenue or otherwise adversely affect our business, financial condition and results of operations.

We could face shortages, disruptions or cost increases in connection with our supply of raw materials, components, manufacturing equipment and other requirements, which could adversely affect our business, results of operations or financial condition.

Our manufacturing operations depend upon obtaining deliveries of adequate supplies of raw materials and components on a timely basis. To avoid supply problems, we work to develop close relationships with multiple suppliers; however, some raw materials and components are only available from a limited number of suppliers. From time to time, suppliers may extend lead times, limit supply to us or increase prices due to capacity constraints, fluctuations in market prices, the imposition of tariffs or other factors. Any shortages in the supply of raw materials and components could disrupt our manufacturing operations or increase the costs we incur. If we are unable to secure sufficient quantities of raw materials and components or reflect price increases in the pricing of our products, our business or profitability will be adversely affected. Furthermore, defects in raw materials or components could disrupt our manufacturing operations or increase the costs we incur, and if we fail to identify such defects prior to the inclusion of such raw materials or components in our products, the reliability and reputation of our products could be adversely affected.

In addition, we have purchased, and expect to purchase, a substantial portion of our manufacturing equipment from a limited number of qualified foreign and domestic suppliers. From time to time, increased demand for new equipment may cause lead times to extend beyond those normally required by the equipment vendors. The unavailability of equipment, delays in the delivery of equipment or the delivery of equipment that does not meet our specifications could delay the implementation of any future expansion plans and negatively affect our ability to meet customer orders. We also require a significant and continuous supply of electricity to operate our production facilities. As a result, limited supply or increased cost of electricity, especially in Japan where our key production facilities are located, could increase our production costs. In addition, a weakening of the Japanese yen against other currencies often results in higher import prices for oil, coal and liquid natural gas, which may increase the cost of electricity. If electricity rates continue to increase in the future in Japan, the resulting increase in costs would negatively affect our results of operations.

Any disruptions to our manufacturing operations due to problems relating to the availability and cost of raw materials, components, manufacturing equipment, electricity and other requirements could have a material adverse effect on our business, financial condition and results of operations.

Our products may be subject to product liability and warranty claims, which could be expensive and could divert management's attention.

We make highly complex electronic components and, accordingly, there is a risk that defects may occur in any of our products. Such defects may damage our reputation and can give rise to significant costs, including expenses relating to recalling products, replacing defective items, writing down defective inventory, delays in, cancellations of, rescheduling or return of orders or shipments and loss of potential sales. In addition, the occurrence of such defects may give rise to product liability and warranty claims, including liability for damages caused by such defects. The risks of such claims are relatively higher in the automotive industry, as compared to the other industries in which we are involved. If we release defective products, our reputation could suffer and we could lose sales opportunities and become liable to pay damages. Moreover, since the cost of replacing defective products is often much higher than the value of the products themselves, we may at times face damage claims from customers in excess of our warranty obligations or the relevant sales amounts, including consequential damages.

We also face exposure to potential liability resulting from how our customers typically integrate the semiconductors we sell into numerous products, which are then in turn sold into the marketplace. These end products are often highly complex and may occasionally involve the use of our product in ways not originally envisioned by us. In these cases, our products can only be fully tested when deployed in the end products, and our customers may discover defects or errors only after the end products have been deployed. In addition, we may be named in product liability claims relating to such end products even if there is no evidence that our products caused a loss. Product liability claims could result in large expenses relating to defense costs or damages awards. In particular, the sale of product solutions and components for the automotive industry involves a high degree of risk that such claims may be made given the potential for widespread and serious consequences due to failures of product solutions or components. In addition, we may be required to participate in a recall if any of our product solutions prove to be defective, or we may voluntarily initiate a recall or make payments related to such claims as a result of various industry or business practices or in order to maintain good customer relationships. Each of these actions would likely harm our reputation and lead to substantial expense. We maintain recall insurance and product liability insurance policies, but there is no guarantee that such policies would cover the full costs of such events and any product recall or product liability claim could have a material negative impact on our reputation, business, financial condition and results of operations.

A significant portion of our revenue is to a limited number of customers, and we may suffer if any one of our major customers significantly reduces its purchases from us or defaults on payments to us.

Historically, we have relied on a limited number of customers for a substantial portion of our total revenue. Our ten largest customer groups accounted for approximately 40%, 37% and 41% of our revenue in the fiscal years ended December 31, 2018, 2019 and 2020, respectively. In recent years, some of our customers have experienced consolidation and have both horizontally and vertically integrated their businesses. Such consolidations and integrations may impact our business if our relationships with the new entities are reinforced or jeopardized as a result.

There can be no assurance that our key customers will continue to purchase from us at the same levels as in the past. If any of these major customers significantly reduces its purchases from us, either as a result of industry conditions, geopolitical factors or specific events relating to a particular customer, or fails to meet its payment obligations, our business, financial condition and results of operations could be materially and adversely affected. In addition, if one or more of our key customers experiences a downturn in their business, they may default on one or more of our trade receivables, and we may incur impairment losses on trade receivables as a result.

Delay, reduction or cancellation of orders of products designed to meet a particular customer's specifications may have an adverse effect on our business.

Our products include custom-made product solutions designed to our customers' particular specifications. Our customers may delay, reduce or cancel their purchase orders, sometimes on short notice, if they fail to successfully market their end products. Our customers may also change the specifications required of our product. These changes may cause us to hold excess inventory and may cause delays or additional costs which may adversely impact our revenue and reduce our profitability relating to such product. In addition, we make capital expenditures on equipment for the production of such custom-made products, and if our customers' specifications change or their production requirements are reduced we may be unable to recoup our investment to the extent that such equipment cannot be modified to meet the new specifications or repurposed for other products. If a customer reduces, cancels or changes the specification requirement for a product that we have designed for them, we may be unable to sell it to other customers and this could adversely affect our business, financial condition and results of operations.

We have high fixed costs, which can cause relatively small changes in revenue to have a material effect on our margins, profits and cash flows.

Our business requires that we incur capital expenditures in facilities and equipment in order to maintain our production capacity, which can result in significant depreciation costs. Due to the relatively large amounts of such capital expenditures and depreciation costs inherent in the business as well as the need to maintain significant research and development and manufacturing costs, a majority of our operating expenses is relatively unaffected by changes in revenue. Our margins, profits and cash flows may be materially reduced as a result of decreases in revenue due to our relatively high fixed cost structure. Our ability to reduce fixed costs in response to a decline in revenue may be limited, and we may not be able to reduce such costs in any way that would have a material impact on our margins, profits and cash flows, or at all. As a result, a relatively minor decrease in revenue could have a significant negative impact on our margins, profits and cash flows, and increases in any of our fixed costs, to the extent those increases are not accompanied by a comparable increase in revenue, may also reduce our margins, profits and cash flows.

We are reliant on distributors for the majority of our sales in Japan and the rest of Asia, which could affect our sales in such regions.

In Japan and the rest of Asia, the majority of our products are sold via distributors, and we rely on certain major distributors for a significant portion of these sales. For example, sales to Ryosan Company, Limited accounted for 10.5% and 10.3% of our total revenue for the fiscal years ended December 31, 2019 and 2020, respectively. Furthermore, our key distributors provide field application engineering, inventory, logistic and other sales-related services that we do not provide and are not easily replaceable. If we are unable to provide these distributors with competitive sales incentives or margins, or are unable to secure sales volumes that the distributors consider appropriate, such distributors could consider reducing sales of our products, which could adversely affect our business, financial condition and results of operations.

In addition, if our distributors are unable to sell an adequate amount of their inventory of our products in a given quarter to dealers and end customers or if they decide to decrease their inventory for any reason, such as due to adverse global economic conditions or due to any downturn in technology spending, our sales to these distributors and our revenues may decline. We also face the risk that our distributors may purchase, or for other reasons accumulate, inventory levels of our products in any particular quarter in excess of future anticipated sales to end customers. If such sales do not occur in the time frame anticipated by these distributors for any reason, these distributors may substantially decrease the amount of products they order from us in subsequent periods until their inventory levels realign with end customer demand, which would harm our business and could adversely affect our product revenues in such subsequent periods.

Our business is and will continue to be subject to the risks generally associated with international business operations.

We have substantial sales and marketing operations outside of Japan, including in the United States, Asia and Europe. We also have manufacturing facilities located outside of Japan, including China and Malaysia, and use third-party manufacturers throughout Asia for some of our products.

Our customers are located in many locations around the world, and we market our products in various major global locations, including Europe, China and the United States. Our sales to customers outside Japan represented 63.6% and 66.3% of our revenue for the fiscal years ended December 31, 2019 and 2020, respectively, and 65.1% of our revenue for the three months ended March 31, 2021. Our business is therefore subject to risks involved in international business, including, without limitation, the following:

- negative economic or political developments, including as a result of political tensions involving countries in which we do business;

- changes in local labor conditions, including rising wage levels;

- transportation delays;
- exchange rate fluctuations;
- exporting or importing issues related to export or import restrictions, including deemed export restrictions, tariffs, quotas and other trade barriers and restrictions;
- restrictions on currency convertibility;
- changes in laws and policies affecting trade and investment;
- a worsening of Japan's relationships with China, South Korea or other foreign countries;
- governmental regulations applicable to manufacturing operations;
- the failure of end-product markets which we have targeted for additional growth to expand or develop to the degree or at the rate we anticipated;
- varying standards and practices of regulatory, tax, judicial and administrative bodies;
- power and other utility shutdowns and shortages;
- seasonal reductions in business activity;
- linguistic and communication difficulties;
- difficulties hiring highly skilled management, technical and other personnel;
- wars and acts of terrorism; and
- natural disasters, epidemics or outbreaks (such as the COVID-19 pandemic).

Our results of operations could also be adversely affected by changes in political or economic conditions in regions where our customers market their own products.

Loss of our key management and other personnel and inability to attract key management and other personnel could impact our business.

We depend on our senior executive officers and other key personnel to operate our business and on technical experts to develop new products and technologies. Turnover in these positions could adversely affect our operations. Competition for qualified employees among companies that rely heavily on engineering and technology is intense, and the loss of qualified employees or an inability to attract, retain and motivate additional highly skilled employees required for the operation and expansion of our business could hinder our ability to conduct research and development activities successfully and develop marketable products. In particular, the use of software solutions for semiconductor products has been increasing in recent years and although we have expanded our development workforce, we may not be successful in attracting and retaining experienced software engineers and other personnel who are able to successfully strengthen our software development capabilities in the future.

Our success going forward depends in part on our ability to continue to recruit, train, develop and retain such personnel, and if we lose key personnel to competitors or at a rate greater than we anticipate, or if we have difficulty attracting new, highly talented employees, our reputation and our business, financial condition and results of operations could be affected.

If we lose the services of key senior management personnel, we may not be able to find suitable replacements or integrate replacement personnel in a timely manner, which would harm our business. In addition, our continuing growth will, to a large extent, depend on the attention of key management personnel to strategic decisions and other important affairs relating to our business and operations. If our executive officers are not able to devote sufficient time to such important affairs due to poor health, diverted attention to litigation or other unproductive matters or other factors, our operations may be adversely affected.

Losses relating to our pension and retirement benefit plans and a decline in returns on our plan assets may negatively affect our financial condition and results of operations.

We have defined benefit pension plans for more than half of our employees. Costs related to net defined benefit liability and net defined benefit assets are calculated based on actuarial assumptions, such as discount rates, and may increase if the fair value of our pension plan assets declines or if there is a change in the actuarial assumptions on which the calculations of the net defined benefit liability are based. For more information on our defined benefit pension plans, see Note 22 to our consolidated financial statements included in this offering circular. Changes in the interest rate environment and other factors may also adversely affect the amount of net defined benefit liability.

Impairment of the carrying value of our non-current assets could materially and adversely affect our financial condition and results of operations.

We own substantial non-current assets, primarily consisting of property, plant and equipment, such as our plant facilities. As of December 31, 2020, we had ¥187,354 million in property, plant and equipment, representing 11.6% of our total assets. We determine whether there is any indication that an asset may be impaired each fiscal year, and if such indication exists, an impairment test is performed. In the impairment test, a recoverable amount is estimated, and the carrying amount and the recoverable amount are compared. If the recoverable amount of assets or cash-generating units is lower than the carrying amount as a result of the impairment test, an impairment loss is recognized. For more information on the impairment of our non-current assets, see Note 15 to our consolidated financial statements for the fiscal year ended December 31, 2020 included in this offering circular.

A significant amount of judgment is involved in determining if an indication of impairment exists. Factors may include, among others: a significant decline in the expected future cash flows of the business or product line which benefits from the asset in question; a significant adverse change in legal factors or in the business climate; unanticipated competition; the testing for recoverability of a significant asset group within a reporting unit and slower growth rates. Any adverse change in these factors could have a significant impact on the recoverability of these assets and negatively affect our financial condition and results of operations.

We cannot accurately predict the amount and timing of any impairment of non-current assets. Should these assets not generate sufficient cash flows and we recognize impairment of the value of such assets, there could be a material adverse effect on our financial condition and results of operations.

We may have to recognize additional charges on our consolidated statements of profit or loss due to impairment of goodwill and other intangible assets.

We carry significant amounts of goodwill and intangible assets on our consolidated statement of financial position as a result of past acquisitions, including our acquisitions of Intersil and IDT. If completed as expected, we also expect to record significant additional goodwill and intangible assets in connection with the Dialog Acquisition. As of December 31, 2020, we had goodwill of ¥590,459 million and intangible assets of ¥364,764 million. Goodwill and intangible assets recorded in relation to acquisitions are recognized on our consolidated statement of financial position on the acquisition date. Under IFRS, we are required to examine such assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies—Impairment of Non-financial Assets." The recognition of such impairment charges may adversely affect our business, financial condition and results of operations.

We are increasingly reliant on information technology in our operations, and any failure of such systems could harm our ability to effectively operate our business.

We rely heavily on information systems across our operations, including for procurement, manufacturing, sales, delivery and various other processes and transactions. Our ability to effectively manage our business and coordinate the production, distribution and sale of our products depends significantly on the reliability and capacity of these systems.

We regularly face attempts by others to gain unauthorized access through the internet, or to introduce malicious software, to our information systems. Additionally, individuals or organizations, including malicious hackers, state-sponsored organizations, insider threats including employees and third-party service providers, or intruders into our physical facilities, may attempt to gain unauthorized access and corrupt the processes of hardware and software products that we manufacture and services we provide, steal proprietary information related to our business, products, employees, and customers, or interrupt our systems and services or those of our customers or others. Such attempts are increasing in number and in technical sophistication, and if successful, could expose us and the affected parties to risk of loss or misuse of proprietary or confidential information or disruptions of our business operations. Our information technology infrastructure also includes products and services provided by third parties, and these providers may experience breaches of their systems and products that impact the security of our systems and our proprietary or confidential information.

The failure of our information systems to operate effectively, problems with transitioning to upgraded or replacement systems, a material network breach in the security of these systems as a result of a cyber-attack or other incident, or any other failure to maintain a continuous and secure cyber network, could result in delays in customer service or a worsening in our relationships with customers, reduce efficiency in our operations, require significant capital investments to remediate the problem or result in negative publicity that could harm our reputation.

Leaks of confidential information could adversely affect our business.

We store and manage a significant amount of confidential information regarding the technology, research and development, manufacturing, sales and operating activities of us and our customers, as well as personal information relating to our customers and our employees. We are subject to contractual restrictions on the use and dissemination of such information, as well as restrictions relating to such information imposed by various laws and regulations in Japan and other countries. While we have implemented systems to protect and manage any confidential information in conformance with applicable laws, there can be no assurance that our systems will prevent leaks of confidential information. If any confidential information stored or managed by us is improperly disclosed or if third parties improperly use or gain access to such confidential information, we may be the subject of lawsuits for damages and our business, results of operations, financial condition and reputation could be adversely affected. In addition, leaks of confidential information relating to our technologies and manufacturing processes may harm our competitive position if our competitors become capable of copying such technologies or processes.

Environmental laws and regulations may expose us to liability and increase our costs. Changes in these environmental laws and regulations as well as customer expectations for environmentally friendly products and manufacturing processes could negatively impact our business.

We are subject to a variety of environmental regulations in Japan and the other countries in which we operate, including regulations relating to waste water discharge, air emissions, handling of hazardous materials, disposal of solid and hazardous wastes, remediation of soil and ground water contamination and energy consumption. We use a number of chemicals and similar substances and generate wastes that are classified as hazardous. Although we strive to reduce our environmental impact by improving our manufacturing process and facilities, establishing related management systems and raising production efficiency by decreasing resource consumption and energy consumption, such efforts may not be successful. Any failure on our part to comply with any present or future environmental regulations could result in the assessment of damages or imposition of fines against us, suspension of production, a cessation of operations in one or more regions or damage to our reputation. In addition, environmental regulations could require us to acquire costly equipment or to incur other significant compliance expenses that may materially and negatively affect our financial condition and results of operations. Furthermore, any changes in environmental laws or regulations, or changes in their enforcement, affecting or limiting, for example, our chemical use, manufacturing processes, air emissions or disposal practices, could restrict our ability to operate as we are currently operating, impose additional costs, cause delays in the delivery of our products to customers or require modifications to our manufacturing processes or facilities. The addition of, or changes to existing, national or regional regulation of substances contained within our products could cause us to be unable to deliver such products to such countries or regions, or could cause us to incur additional costs in connection with changes to our materials, processes or designs that may be necessary in order to continue delivering such products to such countries or regions.

Failure or alleged failure to comply with regulatory requirements, including competition laws and regulations and anti-corruption laws, could result in the imposition of penalties or sanctions and force us to incur significant legal costs.

We are subject to the regulatory regimes of each country in which we operate, including, among others, those relating to antitrust, anti-corruption, corporate governance, labor, customs regulation and taxation.

Although we have in place internal control and compliance systems for the purpose of complying with such laws and regulations, there can be no assurance that such systems, and our other efforts to promote compliance, will be effective. Any violation of the relevant regulations could result in criminal penalties, sanctions, fines or mandatory suspension from certain business activities and could also adversely affect our reputation, business and results of operations. We may also incur significant costs associated with enhancing our compliance functions as regulations and laws change in the countries in which we operate.

In the United States, we must comply with certain laws and regulations related to the export of our products, including, among others, the EAR, administered by the U.S. Department of Commerce, Bureau of Industry and Security; the International Traffic in Arms Regulations, or ITAR, administered by the U.S. Department of State, Office of Defense Trade Controls Compliance, or DTCC; and trade sanctions, regulations and embargoes administered by the U.S. Department of Treasury, Office of Foreign Assets Control. Some of the products that are manufactured by Renesas Electronics America Inc. (which includes the businesses acquired in our 2017 acquisition of Intersil and our 2019 acquisition of IDT) have military or strategic applications and either (1) appear on the United States Munitions List, or USML, as set forth in the ITAR, or (2) represent so-called "dual use" items governed by the EAR. As a result, these products require individual validated licenses in order to be exported to certain jurisdictions. Any failure to properly classify products or otherwise comply with these laws and regulations could result in civil or criminal penalties, fines, investigations, adverse publicity and restrictions on our ability to export such products; repeat failures could carry more significant penalties. Any changes in export regulations may further restrict our ability to export such products. The length of time required by the licensing processes can vary, potentially delaying the shipment of products and the recognition of the corresponding revenue, or causing our customers to cancel their orders altogether. These and similar restrictions on the export of our products could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition. See "Business—Environmental Standards and Government Regulation."

We have been, are and in the future may be subject to investigations by regulatory authorities in a number of countries concerning possible violations of antitrust laws. As a result of these investigations, we may be subject to penalties, sanctions or fines in one or more countries, and we may become subject to civil lawsuits seeking monetary damages in connection with any violations of applicable antitrust laws. In addition, while it is difficult to predict the outcome of these investigations and legal claims, the resolution of such investigations and claims will require significant time and cost. As a result of any of the foregoing factors, our business, results of operations, financial condition and reputation could be adversely affected. For a discussion of pending legal proceedings, see "Business—Legal Proceedings."

We are subject to ongoing litigation and the risk of litigation and other legal proceedings in the ordinary course of business.

We are and may in the future become a party to a variety of litigation or other claims and suits, including those that arise from time to time in the various jurisdictions in which we operate. Our business is subject to the risk of litigation involving current and former employees, customers, end-product segment producers, suppliers, competitors, patent holding companies, government agencies or others through private actions, class actions, whistleblower claims, administrative proceedings, regulatory actions or other litigation. The claims that may be brought against us under Japanese law may differ significantly than those that could be brought under the laws of other jurisdictions, including the United States, and the potential outcome of such claims may also vary significantly. Regardless of the merits of the claims, the cost to defend current and future litigation may be significant, and such matters can be time-consuming and divert management's attention and resources.

For a discussion of pending legal proceedings, see "Business—Legal Proceedings."

We may incur valuation losses resulting from declines in the value of our inventory.

Declines in the value of our inventory, including inventories of our products as well as raw materials, may require us to incur valuation losses. The acquisition cost of inventories comprises all costs of purchase, costs of conversion and all other costs incurred in bringing the inventories to their present location and condition. After the initial recognition, inventories are measured at the lower of cost and net realizable value, but if cost exceeds net realizable value, the inventories are written down to net realizable value. Some of our products have in the past and may in the future become obsolete while in inventory due to changing customer specifications, or become excess inventory due to decreased demand for our products and an inability to sell the inventory within a foreseeable period.

Our financial results are subject to substantial quarterly and annual fluctuations.

Our revenue and financial results have fluctuated in the past and are likely to fluctuate in the future. These fluctuations are due to a number of factors, many of which are beyond our control. These factors include, among others:

- changes in end customer demand for the products manufactured and sold by our customers;
- the timing of receipt, reduction or cancellation of important orders by customers;
- fluctuations in the levels of component inventories held by our customers;
- the gain or loss of significant customers;
- the inventory levels maintained by, performance of and our relationship with our key distributors;
- market acceptance of our products and our customers' products;
- our ability to develop, introduce and market new products and technologies on a timely basis;
- the timing and extent of product development costs;
- new product and technology introductions by competitors;
- fluctuations in manufacturing yields;
- availability and cost of products from our suppliers;
- changes in our product mix, customer mix or levels of intellectual property revenue;
- intellectual property disputes;
- natural disasters, such as floods, hurricanes and earthquakes, as well as interruptions in power supply resulting therefrom or due to other causes;
- other expenses resulting from ongoing business structural reforms, which may be greater than anticipated and may not achieve the expected results;
- loss of key personnel or the shortage of available skilled workers;
- the effects of competitive pricing pressures, including decreases in average selling prices of our products;
- the effects of adverse economic conditions in the U.S. and international markets, including impacts from the COVID-19 pandemic;
- formal or informal imposition of new or revised export, import, or doing-business regulations, including trade sanctions and tariffs, which could be changed without notice;
- the effectiveness of our efforts to refocus our operations and reduce our cost structure;
- manufacturing, assembly and test capacity and lead times;
- costs associated with debt redemption and refinancing activities; and
- our ability to hire, retain and motivate key employees to meet the demands of our customers.

The foregoing factors are difficult to forecast, and these, as well as other factors, could have a material negative impact on our quarterly or annual financial results.

Risks Related to Our Proposed Acquisition of Dialog

We may not be able to complete the Dialog Acquisition on the expected schedule, or at all.

On February 8, 2021, we announced that we had come to an agreement for the acquisition of Dialog for an aggregate value of approximately €4.9 billion (approximately ¥615.7 billion using an exchange rate of 126 yen per Euro as of February 3, 2021) in an all-cash transaction. The Dialog Acquisition will be effected pursuant to a Scheme of Arrangement under Part 26 of the U.K. Companies Act 2006.

The Dialog Acquisition is subject to the satisfaction (or waiver) of customary closing conditions, some of which are beyond our control and may prevent or otherwise negatively affect its consummation. These conditions include, among other things, (i) the passing of certain resolutions by the Dialog shareholders at the Dialog general meeting and the court meeting, which were duly passed by the requisite majorities on April 9, 2021, (ii) the sanctioning of the Scheme by the High Court of Justice in England and Wales and (iii) various competition, antitrust and other regulatory approvals from relevant countries, including in, among other jurisdictions, Germany, the People's Republic of China, Taiwan and the United States. Although we have begun the process for obtaining all applicable regulatory and other approvals, we do not expect to have received all regulatory and other approvals until after the closing date of the global offering. See "Proposed Acquisition of Dialog—Certain Terms of the Scheme of Agreement" for more information regarding these closing conditions.

In addition, if the Dialog Acquisition is not completed by the long stop date of January 21, 2022 (subject to extension to a later date to be agreed upon by Dialog and Renesas (with such consents and approval as may be required by third parties)), then the Scheme will lapse and the Dialog Acquisition will not proceed. On the other hand, even if certain of the closing conditions have not been satisfied or waived, we may not invoke such a condition to cause the Dialog Acquisition not to proceed, to lapse or to be withdrawn unless such circumstances leading to such condition not being satisfied are of material significance to us in the context of the Dialog Acquisition.

We currently expect that the Dialog Acquisition will close by the end of the 2021 calendar year and that, upon closing, Dialog will become our wholly-owned subsidiary. There is no assurance, however, that we will be able to complete the Dialog Acquisition under the contemplated terms or proposed timeframe or at all, and in such cases, we may incur acquisition-related expenses without realizing the expected benefits. Moreover, we are not entitled to contractual indemnification under the Scheme and the Scheme is also conditional upon a number of conditions and representations outside of our control, the breach of which could result in the inability to successfully complete the Dialog Acquisition. We may also assume unexpected contingent or other liabilities upon the close of, or in connection with, the acquisition. In addition, the price of our common stock may significantly fluctuate to the extent that the current market price reflects an assumption that the Dialog Acquisition will be completed in accordance with the contemplated terms and proposed timeframe.

If the Dialog Acquisition does not close, our management will have broad discretion over the use of the proceeds we receive in this offering and might not apply the proceeds in ways that increase or preserve the value of your investment.

If the Dialog Acquisition does not close, our management will have broad discretion over the use of the net proceeds from this offering. Our management might not apply the net proceeds in ways that ultimately increase or preserve the value of your investment. Specifically, if the Dialog Acquisition does not close, we expect to use the net proceeds for the repayment of existing borrowings, investments in our businesses, capital expenditure or working capital. As a result, we might not be able to yield a significant return, if any, on any investment of these net proceeds.

Following the Dialog Acquisition, any failure to successfully integrate Dialog's operations with our group could adversely impact our stock price and future business and operations.

If the Dialog Acquisition is completed, the integration of Dialog's businesses into our operations is expected to be a complex and time-consuming process and may not be successful. The acquisition of Dialog is an integral part of our strategy to generate sustainable growth and expand our ability to deliver comprehensive solutions. However, there can be no assurance that we will be able to recoup this substantial investment through a successful integration of Dialog's business. Specifically, the anticipated benefits and synergies resulting from the acquisition are subject to, among other things, the following uncertainties:

- we may face challenges in combining Dialog's infrastructure, management and information technology systems with ours;

- our management's focus on the integration could result in distraction from other operating objectives;
- there may be difficulties in conforming standards, controls, procedures and accounting and other policies, as well as business cultures and compensation structures;
- unanticipated impediments to the realization of synergies with Dialog may come to light during the integration process and prevent us from realizing such synergies;
- we may not be able to retain key customers of Dialog; or
- as the majority of Dialog's workforce consists of skilled research and development engineers, if we are unable to retain these and other key personnel at Dialog, there may be a negative impact on Dialog's business and financial results.

In addition, the success of the Dialog Acquisition depends on our ability to realize the anticipated growth opportunities and synergies we expect from the acquisition. Even following the completion of the Dialog Acquisition, it will be necessary for us to continue to devote significant time and resources to enhance the efficiency of our combined personnel structure and management and operational functions in order to realize the anticipated cost and revenue synergies from the acquisition, all of which come with individual risks and challenges and will take a number of years to be realized. See "Business—Our Strategies—Our proposed acquisition of Dialog will increase our presence for analog and non-auto markets, which will accelerate our growth and create synergies." The expected synergies may also be affected by changes in the overall economic, political and regulatory environment and the realization of the other risks relating to our business described herein.

Furthermore, in connection with the acquisition of Dialog, we expect to record significant amounts of goodwill and intangible assets. If we are unable to achieve the anticipated benefits of this acquisition, we could be required to recognize significant impairment losses related to such goodwill and intangible assets, potentially up to their full value. See "—Risks Related to Our Business and Industry—We may have to recognize additional charges on our consolidated statements of profit or loss due to impairment of goodwill and other intangible assets" above.

Dialog's businesses are also subject to significant risks.

Dialog's current businesses are also affected by the various risks applicable to semiconductor manufacturers and other categories of risk described elsewhere in this section. Dialog is particularly affected by macroeconomic risks, market risks and legal and regulatory developments in the United Kingdom, where Dialog is headquartered. We understand that specific risks that may affect Dialog's operations include:

- as Dialog's revenue is heavily reliant upon the commercial success of its customers' end products, principally in the mobile phone, tablet and wearables markets, if demand for these products flattens or declines, Dialog's revenue and profitability would be negatively impacted;
- Dialog relies on a relatively small number of customers, primarily within the mobile and consumer electronics sectors, for a substantial proportion of its revenue, and the loss of its largest customer, Apple Inc., or Apple, or a decline in the volume of products sold to Apple, would have a material effect on its revenue and profitability;
- as Dialog has been executing a strategy of transforming its business in recent years, such as by entering an agreement with Apple in 2018 to license certain power management technologies and transfer certain assets as well as making acquisitions, the failure of Dialog in achieving such strategies could result in negative impacts to both its operations and profitability; and
- as Dialog runs a fabless business model and outsources its production of silicon wafers, packaging and testing of integrated circuits to third-party suppliers, mainly in Asia, the failure of any of these third-party vendors to deliver products or otherwise perform as required could result in negative impacts on its revenue and profitability and damage Dialog's relationships with its customers.

In addition, the above risks are based on information obtained from Dialog's public filings or other publicly available sources and accordingly, although we believe such information to be accurate, such information cannot be independently verified by us, and the above may not accurately describe all existing or potential risks relating to Dialog's business that may arise after completion of the Dialog Acquisition.

The Dialog Acquisition subjects us to an increased risk of exchange rate fluctuations.

The purchase price for the Dialog Acquisition is denominated in Euros and is subject to foreign exchange fluctuations between the yen and the Euro. In addition, any proceeds that we receive from this offering as well as the Bridge Facilities Agreement that we entered into in February 2021 are denominated in yen. Although we have already hedged a significant portion of our foreign exchange rate exposure in relation to the purchase price for the Dialog Acquisition, this may not be sufficient to prevent an increase in the purchase price if the yen were to depreciate significantly. In addition, due to our increased geographical diversity following the completion of the Dialog Acquisition, we will be subject to an increased risk of exchange rate fluctuations.

The unaudited pro forma condensed consolidated financial information and financial information on a simple combined basis presented herein are not necessarily representative of our actual or future financial performance.

The unaudited pro forma condensed consolidated financial information and financial information on a simple combined basis for us and Dialog as of and for the fiscal year ended December 31, 2020 presented in this offering circular under "Proposed Acquisition of Dialog" has been prepared by us for illustrative purposes only to show the effect of the acquisition of Dialog on our financial condition and results of operation.

The unaudited pro forma condensed consolidated financial information, because of its nature, is subject to uncertainties and may not give a true picture of our actual financial results. We have prepared the unaudited pro forma condensed consolidated financial information as of and for the fiscal year ended December 31, 2020 based on (i) our audited consolidated financial statements for the fiscal year ended December 31, 2020 which were prepared in accordance with IFRS and (ii) the audited consolidated financial statements of Dialog for the fiscal year ended December 31, 2020, which were prepared in accordance with IFRS as adopted by the European Union. Moreover, we also present certain additional adjusted financial information of Renesas and Dialog, which we have prepared by a simple aggregation of Renesas' adjusted and Dialog's underlying financial figures. These figures are derived from the adjusted/underlying figures from the corporate disclosures of the two companies without reconciling any differences between the respective adjustment methods and without applying any pro forma adjustments other than for finance costs related to the acquisition. Therefore, these figures may not be an accurate representation of our actual combined adjusted figures after the acquisition of Dialog.

In addition, the unaudited pro forma condensed consolidated financial information is based upon available information and certain estimates that we believe are reasonable, and is prepared by us by using certain adjustments, assumptions and allocations which have not been independently verified and are not fully set out herein. The unaudited pro forma condensed consolidated financial information presented in this offering circular has not been audited or been subject to review procedures specified by review standards by our independent auditor, nor has it been presented in compliance with the guidelines of any regulatory body or stock exchange. There can be no assurance that the adjustments, assumptions or allocation principles applied in deriving the unaudited pro forma consolidated financial information presented in this offering circular are accurate or appropriate or that they are necessarily indicative of our business and results of operations that would have actually transpired had the acquisition and consolidation of Dialog taken effect on January 1, 2020 or December 31, 2020.

In addition, we have not completed the purchase price allocation in connection with the acquisition of Dialog. As such, our pro forma adjustments under other assets that is included within the unaudited pro forma condensed consolidated financial information contains the difference between the acquisition consideration and Dialog's total equity, which may include amounts that would ultimately be characterized as goodwill, intangible assets and inventory among others in connection with the acquisition of Dialog, many of which would be subject to depreciation and impairment accounting that are not reflected in the unaudited pro forma condensed consolidated financial information. We expect to reallocate or otherwise adjust the respective amounts of goodwill, intangible assets and inventory among others as we complete the purchase price allocation. As a result, the purchase price allocation performed after the completion of the Dialog Acquisition is expected to be materially different from the information included within our unaudited pro forma condensed consolidated financial information, and this could have a material adverse effect on our actual post-closing results of operations. Furthermore, the unaudited pro forma condensed consolidated financial information has not been presented in accordance with Regulation S-X published by the SEC. See "Proposed Acquisition of Dialog—Unaudited Pro Forma Financial Information."

In addition, the unaudited pro forma condensed consolidated financial information is not necessarily representative of our current or future financial performance. Moreover, the unaudited pro forma condensed consolidated financial information does not include, among other things, adjustments relating to costs expected to be incurred in relation to restructuring or integration activities, estimated synergies, the effect of any further refinancing of commitments under the Bridge Facilities Agreement or other potential items that are currently not factually supportable or expected to have a continued impact on our results following the completion of the Dialog Acquisition.

Risks Related to Our Shares

The interests of INCJ, our largest shareholder, may differ from or conflict with those of us or our other shareholders.

As of December 31, 2020, INCJ, our largest shareholder, held 32.15% of our issued and outstanding shares of common stock. Upon completion of the global offering, we expect INCJ will hold 20.01% of our issued and outstanding shares of common stock (assuming the over-allotment options are exercised in full). Accordingly, INCJ may continue to wield significant influence over our fundamental decisions. In addition, our board of directors currently includes one outside director nominated by INCJ. When exercising its rights as our shareholder, INCJ may take into account not only the interests of us or other shareholders but also its own interests, which at times may conflict with those of us or our other shareholders. For more information regarding INCJ, see "Principal and Selling Shareholders."

Future sales of shares by our existing shareholders or our issuance of additional shares could lower the market price of our shares.

Following the completion of the global offering, our top 10 shareholders (based on December 31, 2020 share issuance and ownership figures, and assuming no share sales or purchases by such shareholders other than sales in the global offering) will hold 50.19% in aggregate of our issued and outstanding common stock, assuming the over-allotment options are exercised in full. In the future, our existing shareholders may decide to sell their shares on the Tokyo Stock Exchange or otherwise. In connection with the global offering, we have agreed with the joint global coordinators to restrictions on any issuance, sale or other disposition of shares of our common stock for a period of 180 calendar days after the closing of the global offering, subject to certain exceptions, and INCJ has agreed with the joint global coordinators to restrictions on any sale or other disposition of shares of our common stock for a period of 180 calendar days after the closing of the global offering, subject to certain exceptions. See "Offering and Sale." After such applicable periods, our board of directors will have the discretion to issue and sell additional shares within the unissued portion of our authorized share capital, generally without any shareholder vote, including, for example, in connection with future acquisitions, and our principal shareholders will be able to sell their remaining shares. If we were to issue additional shares in the future, purchasers of shares in the global offering may experience dilution. The actual or potential issuance of additional shares by us or the sale of additional shares by our principal shareholders could have a material adverse impact on the market price of our shares.

Because of daily price range limitations under Japanese stock exchange rules, system malfunctions or other factors, you may not be able to sell our common stock at a particular price on any particular trading day, or at all.

Stock prices on Japanese stock exchanges are determined on a real-time basis by the equilibrium between bids and offers. These exchanges are order-driven markets without specialists or market makers to guide price formation. To prevent excessive volatility, Japanese stock exchanges set daily upward and downward price range limitations for each stock, based on the previous day's closing price or special quote. Although transactions may continue at the upward or downward limit price, if the limit price is reached on a particular trading day, no transactions may take place outside the limits. Consequently, an investor wishing to sell our shares at a price above or below the relevant daily limit may not be able to effect a sale at such price on a particular trading day, or at all.

In addition, the Tokyo Stock Exchange has in the past experienced trading suspensions due to system malfunctions. On October 1, 2020, a system malfunction caused a full day shutdown of the Tokyo Stock Exchange's trading system. There can be no assurance that the Tokyo Stock Exchange will not experience trading suspensions in the future due to systems malfunctions or other reasons. If trading in our shares is halted on the Tokyo Stock Exchange because of any trading suspensions, you may be unable to trade our shares at the time or price you desire or at all, which could result in losses to you.

Rights of shareholders under Japanese law may be different from rights of shareholders in other jurisdictions.

Our articles of incorporation and the Companies Act of Japan (Act No. 86 of 2005, as amended), or the Companies Act, govern our corporate affairs. Legal principles relating to matters such as the validity of corporate procedures, directors' and executive officers' fiduciary duties and liabilities and shareholders' rights under Japanese law may be different from, or less clearly defined than, those that would apply to a company incorporated in any other jurisdiction. Shareholders' rights under Japanese law may not be as extensive as shareholders' rights under the laws of other countries. For example, under the Companies Act, only holders of 3% or more of our total voting rights or our outstanding shares are entitled to examine our accounting books and records. Furthermore, there is a degree of uncertainty as to what duties the directors of a Japanese joint stock corporation (*kabushiki kaisha*) may have in response to an unsolicited takeover bid, and such uncertainty may be more pronounced than that in other jurisdictions. In addition, in original actions or in actions for enforcement of judgments of U.S. federal or state courts brought before Japanese courts, there is general doubt as to the enforceability in Japan of liabilities based solely on U.S. federal and state securities laws.

Investors holding less than a full "unit" of shares of our common stock will have limited rights as shareholders.

Pursuant to the Companies Act and certain related legislation, our articles of incorporation provide that 100 shares of our common stock each constitute one unit of shares. Under the Companies Act, shareholders of our common stock constituting less than a full unit do not enjoy the right to vote. In addition, shares constituting less than a full unit are not tradable on Japanese stock exchanges on which they are listed. See "Description of our Common Stock—Unit Share System." Under the unit share system, any holder of shares constituting less than a full unit has the right to request that we purchase such shares constituting less than a full unit. In addition, any holder of shares constituting less than a full unit has the right to request that, pursuant to our articles of incorporation and share handling regulations, we sell such number of shares, that, when combined with the number of shares already held by such holder, constitute a whole unit of shares.

Our shareholders of record on a record date may not receive the dividend they anticipate.

The customary dividend payout practice of publicly listed companies in Japan may significantly differ from that widely followed or otherwise deemed necessary or fair in foreign markets. We may ultimately determine any dividend payment amount to its shareholders of record as of a record date, including whether we will make any dividend payment to such shareholders at all, only after such record date. For that reason, our shareholders of record on a record date may not receive the dividends they anticipate.

The Tokyo Stock Exchange is implementing a change in its market segment system.

The Tokyo Stock Exchange has announced that it is going to implement a change in its market segment system from the current First Section, Second Section, Mothers Section and JASDAQ Section market segment system to a "Prime," "Standard" and "Growth" segment system, with listed companies to select the segment (depending on criteria such as number of shareholders, market capitalization of free float and average trading value) by December 2021. The transition to the new market categories is expected to be completed in April 2022. In line with such changes, many stock and other indices such as the Tokyo Stock Price Index (TOPIX) are likely to be renewed, replaced or changed, and such changes may cause some confusion among market participants or adversely affect the liquidity in the Tokyo Stock Exchange markets around the time of implementation. Depending on whether our shares are included in what market participants consider to be attractive indices following such change, the market price and liquidity of our shares may be affected.

Prior notification under the Foreign Exchange and Foreign Trade Act of Japan may be required in the case of acquisition by foreign investors of a certain portion of our shares.

Because we are engaged in certain businesses designated by the Foreign Exchange and Foreign Trade Act of Japan (Act No. 228 of 1949, as amended), or the FEFTA, and its related cabinet orders and ministerial ordinances, which we refer to collectively as the Foreign Exchange Regulations, if a foreign investor intends to consummate an acquisition of our shares that constitutes an "inward direct investment" under the Foreign Exchange Regulations, the foreign investor, in general, must file prior notification of such inward direct investment with the Minister of Finance and any other competent Ministers. "Inward direct investment" includes an acquisition by a foreign investor of shares of our common stock as a result of which acquisition such foreign investor, in combination with any existing holdings, directly or indirectly holds 1% or more of the total number of issued shares or the total number of voting rights. While certain exemptions from the prior notification requirements are provided for under the Foreign Exchange Regulations, certain foreign investors seeking to make such acquisition may not be eligible for such exemptions. If such prior notification is filed, the proposed acquisition may not be consummated until the prescribed screening period expires. In some cases, the Ministers may extend the screening period, and may recommend or order any modification or abandonment of such acquisition. In addition, if certain conditions including those prescribed in light of national security of Japan under the Foreign Exchange Regulations are met, the Ministers may order the disposal of the shares acquired or take other measures. Consequently, any foreign investor seeking to acquire shares of our common stock that constitutes an "inward direct investment" may not consummate such acquisition in an expected time frame, in accordance with an intended plan, or at all.

Additionally, if a foreign investor directly or indirectly holds 1% or more of the total voting rights and, at a general meeting of shareholders, consents to certain proposals having a material influence on our management such as the (i) election of such foreign investor or any of its related persons (as defined in the Foreign Exchange Regulations) as our director or corporate auditors or (ii) transfer or discontinuation of its business, such consent, subject to certain exemptions, also constitutes an "inward direct investment" requiring prior notification. If such prior notification is filed, such consent cannot be given until the prescribed screening period expires. As a result, such foreign investors may have difficulties giving such consent in accordance with an intended plan, or at all. The discussion above is not exhaustive of all possible foreign exchange controls considerations that may apply to a particular investor, and potential investors are advised to satisfy themselves as to the overall foreign exchange controls consequences of the acquisition, ownership and disposition of shares of our common stock or voting rights by consulting their own advisors. For a more detailed discussion on the requirements and procedures regarding the prior notifications under the Foreign Exchange Regulations, see "Japanese Foreign Exchange and Certain Other Regulations."

USE OF PROCEEDS

We estimate that the net proceeds that we will receive from the sale of newly issued shares in the global offering will be approximately ¥208,239 million, or ¥229,185 million if the over-allotment options granted by us are exercised in full, in each case, after deducting estimated underwriting discounts and estimated offering expenses payable by us. We intend to use the net proceeds from the global offering to fund a portion of the purchase price for the Dialog Acquisition as described in this offering circular, or for partial repayment of the borrowings under the Bridge Facilities Agreement that we undertook for payment of the purchase price for the Dialog Acquisition. If the Dialog Acquisition does not close, we expect to use the net proceeds for the repayment of existing borrowings, investments in our businesses, capital expenditure or working capital.

We will not receive any proceeds from the sale of existing shares by INCJ, including in connection with the exercise of the over-allotment options granted by INCJ.

INFORMATION CONCERNING OUR SHARES

Authorized and Issued Share Capital

As of December 31, 2020, we had an authorized share capital of 3,400,000,000 shares of common stock, of which 1,731,898,990 shares were issued. Between January 1, 2020 and December 31, 2020, we issued 21,622,200 shares of our common stock upon the exercise of certain subscription rights to shares issued as stock options. Between January 1, 2021 and April 30, 2021, we issued 1,394,800 shares of our common stock upon the exercise of certain subscription rights to shares issued as stock options.

Dividend Policy

We distribute part of our earnings to shareholders in the form of dividends, while appropriating retained earnings for the research and development of new products and capital expenditures, and maintaining a durable financial structure capable of generating high earnings to maximize enterprise value. For each dividend period, payment determinations are made with consideration of consolidated and non-consolidated income surplus, consolidated income, forecast for income for the next period and cash flow status.

Our basic policy is to pay interim and fiscal year-end dividends. The payment of fiscal year-end dividends is subject to approval at a general meeting of shareholders. In addition, in accordance with our articles of incorporation, we may make interim dividends upon resolution of our board of directors. The record dates for fiscal year-end dividends and interim dividends are December 31 and June 30, respectively. The declaration, payment and amount of any interim dividend is subject to statutory restrictions. See "Description of Our Common Stock—Distribution of Surplus." Dividends paid to shareholders, including those who are non-residents of Japan or non-Japanese corporations without a permanent establishment in Japan, will be subject to Japanese withholding taxes. See "Taxation—Japanese Taxation."

We have made no dividend payments since the fiscal year ended March 31, 2005.

CAPITALIZATION AND INDEBTEDNESS

The following tables set forth our consolidated capitalization and indebtedness as of March 31, 2021 on a historical basis and on an as adjusted basis to give effect to the issuance of 200,054,500 new shares in the global offering (assuming the over-allotment options granted by us are exercised in full).

The information in this table should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and related notes included elsewhere in this offering circular.

	As of March 31, 2021	
	Actual	**As adjusted**
	(millions of yen)	
Indebtedness:		
Bonds and borrowings (current portion)	¥ 93,182	¥ 93,182
Bonds and borrowings (non-current portion)	563,591	563,591
Total bonds and borrowings	¥ 656,773	¥ 656,773
Equity:		
Share capital[(1)]	¥ 29,321	¥ 144,522
Capital surplus[(1)]	208,600	323,801
Retained earnings	463,597	463,597
Treasury shares	(11)	(11)
Other components of equity	16,467	16,467
Total equity attributable to owners of parent	717,974	948,377
Non-controlling interests	3,160	3,160
Total equity	¥ 721,134	¥ 951,537
Total capitalization[(2)]	¥1,284,725	¥ 1,515,128

Notes:

(1) Between April 1, 2021 and April 30, 2021, 325,500 shares of our common stock were issued upon the exercise of certain subscription rights to shares issued as stock options. As of April 30, 2021, share capital and capital surplus are ¥29,438 million and ¥209,221 million, respectively.

(2) Total capitalization is defined as the sum of bonds and borrowings (non-current portion) and total equity.

Except as set forth above, there has been no material change in our total capitalization and indebtedness since March 31, 2021.

SELECTED FINANCIAL AND OTHER DATA

The following selected consolidated financial and other data should be read together with, and is qualified in its entirety by, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this offering circular. We adopted IFRS for financial reporting purposes from the fiscal year ended December 31, 2018, using a transition date of January 1, 2017. As a result, our consolidated financial statements are prepared in accordance with IFRS, which differs in certain significant respects from accounting principles generally accepted in other countries, including U.S. GAAP and Japanese GAAP.

IFRS Selected Financial Data and Other Data

The following tables set forth our selected historical consolidated financial data as of and for each of the fiscal years ended December 31, 2017, 2018, 2019 and 2020 and as of and for the three months ended March 31, 2020 and 2021. We adopted IFRS for financial reporting purposes from the fiscal year ended December 31, 2018, using a transition date from Japanese GAAP to IFRS as of January 1, 2017. The selected consolidated financial data as of and for the fiscal years ended December 31, 2019 and 2020 has been derived from, and should be read in conjunction with, our annual audited consolidated financial statements and related notes included elsewhere in this offering circular. The selected consolidated financial data as of and for the fiscal year ended December 31, 2018 has been derived from, and should be read in conjunction with, our consolidated financial statements as of and for the fiscal year ended December 31, 2019 (which include the comparative period as of and for the fiscal year ended December 31, 2018), included elsewhere in this offering circular.

Financial information as of March 31, 2021 and for the three months ended March 31, 2020 and 2021 is derived from and should be read together with our unaudited condensed quarterly consolidated financial statements included elsewhere in this offering circular.

Financial information as of and for the fiscal year ended December 31, 2017 is derived from our unaudited consolidated financial statements not included in this offering circular.

	For the fiscal year ended December 31,				For the three months ended March 31,	
	2017	2018	2019(1)(2)	2020	2020	2021
	(unaudited)				(unaudited)	(unaudited)
	(millions of yen, except per share information)					
Selected Statement of Profit or Loss Data:						
Revenue	¥ 779,255	¥ 756,503	¥ 718,243	¥ 715,673	¥ 178,743	¥ 203,678
By segment (revenue from external customers):						
Automotive Business	—(4)	389,683	371,145	341,001	93,548	103,248
Industrial/Infrastructure/IoT Business	—(4)	346,569	329,705	363,609	82,555	96,605
Other(3)	—(4)	20,251	17,393	11,063	2,640	3,825
Cost of sales	(425,135)	(424,066)	(423,451)(1)	(379,984)	(96,443)	(105,923)
Gross profit	354,120	332,437	294,792	335,689	82,300	97,755
Selling, general and administrative expenses	(258,145)	(251,021)	(273,454)(1)	(266,268)	(68,326)	(65,830)
Other income	12,339	8,953	2,302	4,036	633	3,155
Other expenses	(6,458)	(22,173)	(17,377)	(8,315)	(1,294)	(4,889)
Operating profit	101,856	68,196	6,263(1)	65,142	13,313	30,191
Finance income	711	1,609	2,186	7,623	3,063	1,618
Finance costs	(3,275)	(2,131)	(8,774)	(7,549)	(2,198)	(14,185)
Share of profit of investments accounted for using the equity method	216	49	—	—	—	—
Profit (loss) before tax	99,508	67,723	(325)	65,216	14,178	17,624
Income tax expense	(1,256)	(16,664)	(5,903)	(19,490)	(2,820)	(3,818)
Profit (loss) from continuing operations	98,252	51,059	(6,228)	45,726	11,358	13,806
Profit after tax from discontinued operations	3,855	—	—	—	—	—
Profit (loss)	¥ 102,107	¥ 51,059	¥ (6,228)(1)	¥ 45,726	¥ 11,358	¥ 13,806
Profit (loss) attributable to:						
Owners of parent	102,025	50,989	(6,317)	45,626	11,289	13,714
Non-controlling interests	82	70	89	100	69	92
Per Share Data:						
Basic earnings (loss) per share	¥ 61.20	¥ 30.57	¥ (3.73)	¥ 26.54	¥ 6.60	¥ 7.92
Diluted earnings (loss) per share	¥ 61.14	¥ 30.50	¥ (3.73)	¥ 25.97	¥ 6.49	¥ 7.75

	As of December 31,				As of March 31,
	2017	2018	2019(1)(2)	2020	2021
	(unaudited)				(unaudited)
	(millions of yen)				
Selected Statement of Financial Position Data:					
Cash and cash equivalents	¥ 139,545	¥ 188,820	¥ 146,468	¥ 219,786	¥ 243,627
Property, plant and equipment	278,087	252,503	232,579	187,354	182,439
Goodwill	190,603	187,230	625,030	590,459	631,591
Intangible assets	202,402	166,524	414,582	364,764	369,694
Total assets	1,136,000	1,055,235	1,668,148	1,608,985	1,688,082
Bonds and borrowings (current portion)	47,875	45,000	93,182	93,181	93,182
Total current liabilities	288,672	241,769	268,641	287,045	286,878
Bonds and borrowings (non-current portion)	180,584	147,248	678,577	586,563	563,591
Total non-current liabilities	268,679	212,498	775,103	702,279	680,070
Total liabilities	557,351	454,267	1,043,744	989,324	966,948
Retained earnings	363,542	410,652	403,857	449,975	463,597
Total equity	578,649	600,968	624,404	619,661	721,134

	For the fiscal year ended December 31,				For the three months ended March 31,	
	2017	2018	2019(1)(2)	2020	2020	2021
	(unaudited)				(unaudited)	(unaudited)
	(millions of yen)					
Selected Statement of Cash Flows Data:						
Net cash flows from operating activities	¥ 173,649	¥172,308	¥ 201,960	¥ 223,889	¥ 28,729	¥ 47,282
Net cash flows used in investing activities	(453,905)	(80,872)	(742,162)	(40,163)	(10,074)	(6,099)
Net cash flows from (used in) financing activities	75,086	(39,251)	500,466	(104,470)	(26,560)	(25,686)

	For the fiscal year ended December 31,		
	2018	2019(1)(2)	2020
	(millions of yen, except per share information)		
Other Data (unaudited):			
Adjusted gross margin(5)	44.2%	42.9%	47.3%
Adjusted gross margin (continuing business only)(6)	n.a.	43.6%	48.3%
Adjusted operating margin(7)	13.8%	12.9%	19.2%
Adjusted operating margin (continuing business only)(8)	n.a.	11.5%	19.1%
Adjusted profit margin(9)	11.0%	10.6%	15.6%
Adjusted earnings (loss) per share(10)	¥ 49.98	¥ 44.82	¥ 64.84
Net debt(11)	¥ 3,428	¥ 625,291	¥ 459,958

Notes:

(1) Following the acquisition of IDT and the absorption-type merger of Former Renesas Electronics America Inc. by IDT, we revised the classification of expenses in order to better present our financial position and results of operations from the three months ended March 31, 2020. This change in accounting policy has been applied retrospectively to the consolidated financial statements for the fiscal year ended December 31, 2019. As a result of this change, compared with the accounting policy prior to retrospective application, cost of sales for the fiscal year ended December 31, 2019 increased by ¥8,136 million, selling, general and administrative expenses decreased by ¥7,554 million and operating profit and profit before tax decreased by ¥582 million, respectively.

(2) As a result of our transition to IFRS16 (defined below), we recognized ¥12,682 million of right-of-use assets and ¥13,102 million of lease liabilities, and we recognized the difference of ¥420 million as accrued leases payments at the beginning of the fiscal year ended December 31, 2019.

(3) "Other" is not a reportable segment and includes commissioned development and manufacturing from our group's design and manufacturing subsidiaries.

(4) We changed our financial statement segment reporting beginning from the nine months ended September 30, 2019 from a single operating segment to two reporting segments. As a result, segment information for the fiscal year ended December 31, 2017 is not available.

(5) Adjusted gross margin is calculated as the percentage of adjusted gross profit, a non-GAAP financial measure, as compared to revenue. For a discussion of adjusted gross margin and other non-GAAP measures, see "—Non-GAAP Measures" below. Our measure of adjusted gross margin may be different from those used by other companies.

(6) Adjusted gross margin (continuing business only) is calculated as the percentage of adjusted gross profit (continuing business only), a non-GAAP financial measure, as compared to adjusted revenue (continuing business only). Adjusted gross profit (continuing business only) is calculated by adjusting for the 6" fab shutdown, reclassifying parts of SG&A to cost of sales and R&D expenses, other structural reform-related EOLs, non-recurring engineering (NRE) revenue and exchange rate adjustments for cost of sales of ¥51.7 billion and ¥48.3 billion and gross profit of ¥46.0 billion and ¥31.7 billion for the fiscal years ended December 31, 2019 and 2020, respectively. In addition, for the fiscal year ended December 31, 2019, when accounting for the additional gross profit for the three months ended March 31, 2019 due to the acquisition of the former IDT, we would have achieved an adjusted gross margin (continuing profit only) run rate of approximately 45%.

(7) Adjusted operating margin is calculated as the percentage of adjusted operating profit, a non-GAAP financial measure, as compared to revenue. For a discussion of adjusted operating margin and other non-GAAP measures, see "—Non-GAAP Measures" below. Our measure of adjusted operating margin may be different from those used by other companies.

(8) Adjusted operating margin (continuing business only) is calculated as the percentage of adjusted operating profit (continuing business only), a non-GAAP financial measure, as compared to adjusted revenue (continuing business only). Adjusted operating profit (continuing business only) is calculated by adjusting for the 6" fab shutdown, other structural reform-related EOLs, non-recurring engineering (NRE) revenue and exchange rate adjustments for research and development expenses of ¥4.2 billion and ¥6.3 billion, selling, general and administrative expenses of ¥22.1 billion and ¥9.3 billion, operating expenses of ¥24.4 billion and ¥15.6 billion and operating income of ¥21.6 billion and ¥16.1 billion for the fiscal years ended December 31, 2019 and 2020, respectively.

(9) Adjusted profit margin is calculated as the percentage of adjusted profit attributable to owners of parent, a non-GAAP financial measure, as compared to revenue. For a discussion of adjusted profit margin and other non-GAAP measures, see the reconciliation table in "—Non-GAAP Measures" for further information. Our measure of adjusted profit margin may be different from those used by other companies.
(10) Adjusted earnings (loss) per share is calculated by dividing adjusted profit attributable to owners of parent by the average number of shares of our common stock outstanding during the relevant period. Adjusted earnings (loss) per share is a non-GAAP earnings measure. For a discussion of adjusted earnings (loss) per share and other GAAP measures, see "—Non-GAAP Measures" below. Our measure of adjusted earnings (loss) per share may be different from those used by other companies.
(11) Net debt is defined as the sum of bonds and borrowings (current and non-current) minus cash and cash equivalents.

Non-GAAP Measures

To provide investors with additional information regarding our financial results, we have presented adjusted revenue (continuing business only), adjusted gross profit, adjusted operating profit, adjusted profit (loss), adjusted EBITDA, adjusted earnings per share and net debt, which are non-GAAP financial measures. We believe that adjusted revenue (continuing business only), adjusted gross profit, adjusted operating profit, adjusted profit (loss), adjusted EBITDA, adjusted earnings per share and net debt as supplemental measures are useful for investors to assess the operating performance of our business as we internally use those figures to review our business status. Non-GAAP financial measures are not financial measures presented in accordance with IFRS and should not be considered in isolation or as a substitute for the figures prepared in accordance with IFRS or as a measure of our profitability or liquidity. Certain non-GAAP figures that are presented in this section are not derived from our audited or unaudited financial statements. We have provided a reconciliation of non-GAAP financial measures to the most directly comparable GAAP financial measures. Descriptions of certain of the adjustments that were made in our calculation of adjusted revenue (continuing business only), adjusted gross profit, adjusted operating profit, adjusted profit (loss), adjusted EBITDA, adjusted earnings per share and net debt are presented below in the reconciliation tables and, where applicable, the descriptions thereafter.

Adjusted Revenue (Continuing Business Only)

The following table provides a reconciliation of revenue to adjusted revenue (continuing business only) for each of the periods indicated.

	For the fiscal year ended December 31,		
	2018	**2019**	**2020**
	(millions of yen)		
Reconciliation of adjusted revenue (continuing business only):			
Revenue	n.a	¥ 718,243	¥ 715,673
Adjustments for fab shutdown and EOLs(1)	n.a	(42,269)	(40,988)
Adjustments for non-recurring engineering revenue(2)	n.a	(17,314)	(11,062)
Adjustments for exchange rates(3)	n.a	(38,167)	(27,944)
Adjusted revenue (continuing business only)	n.a	¥ 620,499	¥ 635,679

Notes:
(1) Adjusted by excluding revenue from the 6" fab shutdown as well as other structural reform-related EOLs.
(2) Adjusted by excluding non-recurring engineering (NRE) revenue.
(3) Adjusted to assume a yen/U.S. dollar exchange rate of ¥100 = U.S.$1 and a yen/Euro exchange rate of ¥120 = €1.

Adjusted Gross Profit

The following table provides a reconciliation of gross profit to adjusted gross profit for each of the periods indicated.

	Fiscal year ended December 31,			Three months ended March 31,	
	2018	2019	2020	2020	2021
	(unaudited)	(unaudited)	(unaudited) (millions of yen)	(unaudited)	(unaudited)
Reconciliation of adjusted gross profit:					
Gross profit	¥ 332,437	¥ 294,792	¥ 335,689	¥ 82,300	¥ 97,755
PPA Effects (Depreciation of property, plant and equipment: COGS)	1,285	1,654	1,505	553	275
PPA Effects (Market valuations of inventories: COGS)	—	11,334	—	—	—
PPA Effects (Others: COGS)	—	230	—	—	—
Stock-based compensation (COGS)	586	949	1,235	311	259
Other adjustments (COGS)(1)	—	—	—	1,323	1,224
Other non-recurring adjustments (COGS)	—	(824)(2)	309(3)	—	2,704(4)
Adjusted gross profit	¥ 334,308	¥ 308,135	¥ 338,738	¥ 84,487	¥ 102,217

Notes:

(1) Adjustment to allocate property tax to each quarterly period as if it were expensed on a straight-line basis over the fiscal year.

(2) Adjustments for changes in accrued bonus and vacation accruals due to the business reform, and IDT-related acquisition costs.

(3) Adjustment for accelerated depreciation related to the Shiga factory closure.

(4) Adjustments for restoration and repairment costs of property, plant and equipment, disposal costs and re-inspection fees of inventories related to damages arising from a fire and an earthquake at the Naka plant, and accelerated depreciation related to the Shiga factory closure.

Adjusted Operating Profit

The following table provides a reconciliation of operating profit to adjusted operating profit for each of the periods indicated.

	Fiscal year ended December 31,			Three months ended March 31,	
	2018	2019	2020	2020	2021
	(unaudited)	(unaudited)	(unaudited) (millions of yen)	(unaudited)	(unaudited)
Reconciliation of adjusted operating profit:					
Operating profit	¥ 68,196	¥ 6,263	¥ 65,142	¥ 13,313	¥ 30,191
Reconciliations in gross profit level	1,871	13,343	3,049	2,187	4,462
PPA Effects (Amortization of intangible assets: SG&A)	15,469	45,721	53,625	14,188	12,905
PPA Effects (Depreciation of property, plant and equipment: R&D)	263	187	263	92	47
PPA Effects (Depreciation of property, plant and equipment: SG&A)	80	60	60	25	11
PPA Effects (Others: R&D)(1)	—	65	—	—	—
PPA Effects (Others: SG&A)(1)	—	61	—	—	—
Stock-based compensation (R&D)	1,886	5,310	6,493	1,927	1,220
Stock-based compensation (SG&A)	2,990	5,781	6,836	1,666	1,519
Other adjustments (R&D)(2)	—	—	—	71	65
Other adjustments (SG&A)(2)(3)	—	—	—	(397)	(64)
Other non-recurring adjustments (R&D)	—	(810)(4)	56(5)	—	10(5)
Other non-recurring adjustments (SG&A, Others)	13,289(6)	16,502(7)	2,014(8)	599(9)	2,241(10)
Adjusted operating profit	¥ 104,044	¥ 92,482	¥ 137,538	¥ 33,671	¥ 52,607

Notes:

(1) Adjustments for dispositions on certain low-value equipment related to the IDT acquisition.
(2) Adjustment to allocate property tax to each quarterly period as if it were expensed on a straight-line basis over the fiscal year.
(3) Adjustment to allocate business tax to each quarterly period as if it were expensed on a straight-line basis over the fiscal year.
(4) Adjustments for changes in accrued bonus and vacation accruals due to the business reform and IDT-related acquisition costs.
(5) Adjustment for accelerated depreciation related to our laser diode (LD) and photo diode/detector (PD) businesses.
(6) Adjustments for legal accrual, changes in accruals related to lawsuits and compensation for damages, and impairment losses and removal expenses of property, plant and equipment associated with consolidating the operating bases, and others.
(7) Adjustments for changes in accrued bonus and vacation accruals due to the business reform, IDT-related acquisition costs, additional retirement benefits on early retirement, impairment losses on IDT-related intangible assets, and changes in accruals related to compensation for damages.
(8) Adjustments for additional retirement benefits, equipment removal expenses associated with the Shiga factory closure and the Saijo manufacturing lines closure, insurance claim income for compensation for damages, impairment losses on right-of-use assets, changes in accrual related to lawsuits, and gain on sale of machinery.
(9) Adjustments for additional retirement benefits, equipment removal expenses associated with the Saijo manufacturing lines closure, and gain on sale of machinery.
(10) Adjustments for changes in accruals related to lawsuits and compensation for damages, gain on sale of machinery, loss on disposal of machinery related to an earthquake at the Naka plant, Dialog-related acquisition costs, and accelerated depreciation and utilities and personnel expenses related to the Shiga factory closure.

Adjusted Profit (Loss) Attributable to Owners of Parent

The following table provides a reconciliation of profit (loss) attributable to owners of parent to adjusted profit (loss) attributable to owners of parent for each of the periods indicated.

	Fiscal year ended December 31,			Three months ended March 31,	
	2018	2019	2020	2020	2021
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)
			(millions of yen)		
Reconciliation of adjusted profit (loss) attributable to owners of parent:					
Profit (loss) attributable to owners of parent	¥ 50,989	¥ (6,317)	¥ 45,626	¥ 11,289	¥ 13,714
Reconciliations in operating profit level	35,848	86,219	72,396	20,358	22,416
Reconciliations in profit (Tax impacts from adjustments)	(3,480)	(3,975)	(6,538)	(1,722)	(3,544)
Adjusted profit attributable to owners of parent	¥ 83,357	¥ 75,927	¥ 111,484	¥ 29,925	¥ 32,586

Adjusted EBITDA

Adjusted EBITDA should not be considered an alternative to the measures presented in accordance with IFRS, as it has important limitations as an analytical tool, because it excludes some, but not all, items that affect operating profit for the year. Our definition of adjusted EBITDA may not be comparable to similarly titled measures of other companies in our industry, which may define this measure differently, thereby diminishing its utility. The following table presents a reconciliation of operating profit to adjusted EBITDA. Descriptions of certain of the adjustments that were made in our calculation of adjusted EBITDA are presented below in the reconciliation table.

	Fiscal year ended December 31,			Three months ended March 31,	
	2018	**2019**	**2020**	**2020**	**2021**
	(unaudited)	**(unaudited)**	**(unaudited)**	**(unaudited)**	**(unaudited)**
			(millions of yen)		
Reconciliation of adjusted EBITDA:					
Operating profit	¥ 68,196	¥ 6,263	¥ 65,142	¥ 13,313	¥ 30,191
Amortization of purchased intangible assets and depreciation of property, plant and equipment[(1)]	17,097	47,622	55,453	14,858	13,238
Stock-based compensation[(2)]	5,462	12,040	14,564	3,904	2,998
Market value of inventories[(3)]	—	11,334	—	—	—
Other reconciliation items in non-recurring expenses and adjustments[(4)]	13,289	15,223	2,379	1,596	6,180
Adjusted operating profit	¥ 104,044	¥ 92,482	¥ 137,538	¥ 33,671	¥ 52,607
Depreciation and amortization (including amortization of long-term prepaid expenses)[(5)]	112,743	148,026	141,527	38,829	32,470
PPA Effects (Depreciation of property, plant and equipment: COGS)[(6)]	(1,285)	(1,654)	(1,505)	(553)	(275)
PPA Effects (Amortization of intangible assets: SG&A)[(7)]	(15,469)	(45,721)	(53,625)	(14,188)	(12,905)
PPA Effects (Depreciation of property, plant and equipment: R&D)[(8)]	(263)	(187)	(263)	(92)	(47)
PPA Effects (Depreciation of property, plant and equipment: SG&A)[(9)]	(80)	(60)	(60)	(25)	(11)
Others (Depreciation of property, plant and equipment: COGS)	—	—	(309)[(10)]	—	(30)[(11)]
Others (Depreciation of property, plant and equipment: R&D)	—	—	(56)[(12)]	—	(10)[(13)]
Adjusted EBITDA	¥ 199,690	¥ 192,886	¥ 223,247	¥ 57,642	¥ 71,799

Notes:

(1) Sum of the following items in the tables of reconciliation of adjusted gross profit and reconciliation of adjusted operating profit: PPA Effects (Depreciation of property, plant and equipment: COGS); PPA Effects (Amortization of intangible assets: SG&A); PPA Effects (Depreciation of property, plant and equipment: R&D); and PPA Effects (Depreciation of property, plant and equipment: SG&A).

(2) Sum of the following items in the tables of reconciliation of adjusted gross profit and reconciliation of adjusted operating profit: Stock-based compensation (COGS); Stock-based compensation (R&D); and Stock-based compensation (SG&A).

(3) Represents PPA Effects (Market valuations of inventories: COGS) in the table of reconciliation of adjusted gross profit.

(4) Sum of the following items in the tables of reconciliation of adjusted gross profit and reconciliation of adjusted operating profit: PPA Effects (Others: COGS); Other adjustments (COGS); Other non-recurring adjustments (COGS); PPA Effects (Others: R&D); PPA Effects (Others: SG&A); Other adjustments (R&D); Other adjustments (SG&A); Other non-recurring adjustments (R&D); and Other non-recurring adjustments (SG&A, Others).

(5) Represents depreciation and amortization (including amortization of long-term prepaid expenses) in Consolidated Statement of Cash Flows or Condensed Quarterly Consolidated Statement of Cash Flows.

(6) Represents PPA Effects (Depreciation of property, plant and equipment: COGS) in the table of reconciliation of adjusted gross profit.

(7) Represents PPA Effects (Amortization of intangible assets: SG&A) in the table of reconciliation of adjusted operating profit.

(8) Represents PPA Effects (Depreciation of property, plant and equipment: R&D) in the table of reconciliation of adjusted operating profit.

(9) Represents PPA Effects (Depreciation of property, plant and equipment: SG&A) in the table of reconciliation of adjusted operating profit.

(10) Represents Others (Depreciation of property, plant and equipment: COGS) under Other non-recurring adjustments (COGS) in the table of reconciliation of adjusted gross profit.

(11) Represents Others (Depreciation of property, plant and equipment: COGS) under Other non-recurring adjustments (COGS) in the table of reconciliation of adjusted gross profit.
(12) Represents Others (Depreciation of property, plant and equipment: R&D) under Other non-recurring adjustments (R&D) in the table of reconciliation of adjusted operating profit.
(13) Represents Others (Depreciation of property, plant and equipment: R&D) under Other non-recurring adjustments (R&D) in the table of reconciliation of adjusted operating profit.

Certain adjustments presented in the above reconciliation tables include non-recurring items include depreciation of intangible assets recognized from acquisitions, other purchase price allocation (PPA) adjustments, cost relating to acquisitions and stock-based compensation as well as other non-recurring expenses and income we believe to be applicable.

In addition, we also present adjusted EBITDA by segment based on our managerial accounting data for the fiscal year ended December 31, 2020:

	Automotive Business	Industrial/Infrastructure /IoT Business	Other	Adjustments[2]	Total	Adjustments[3]	Consolidated Basis Total
				(millions of yen)			
Revenue from external customers	¥ 341,001	¥ 363,609	¥ 11,063	¥ —	¥ 715,673	¥ —	¥ 715,673
Segment profit or loss:[1]	48,356	89,702	1,177	(1,697)	137,538	(72,396)	65,142
Depreciation and amortization	46,174	39,299	236	—	85,709	55,818	141,527
Adjusted EBITDA	¥ 94,530	¥ 129,001	¥ 1,413	¥ (1,697)	¥ 223,247	—	—

Notes:
(1) Segment profit or loss is calculated by deducting cost of sales, general, selling and administrative expenses and other expenses from segment revenue and adding other income. We assess the performance after eliminating intragroup transactions, and therefore, adjustments do not include intragroup transactions.
(2) These adjustments reflect our reportable segment's allocation of the non-recurring items and other specified adjustments deducted or adjusted following a certain set of rules.
(3) These adjustments show the remaining non-recurring items and other specified adjustments deducted or adjusted following a certain set of rules.

Calculation of Adjusted Earnings per Share

The following table shows the calculation of adjusted earnings per share for each of the periods indicated.

	Fiscal year ended December 31,			Three months ended March 31,	
	2018	2019	2020	2020	2021
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)
Adjusted profit (loss) attributable to owners of parent (in millions of yen)	¥ 83,357	¥ 75,927	¥ 111,484	¥ 29,925	¥ 32,586
Divide by: Weighted average number of ordinary shares during the period (thousands of shares)	1,667,717	1,694,151	1,719,345	1,710,788	1,732,607
Adjusted earnings per share (in yen)	¥ 49.98	¥ 44.82	¥ 64.84	¥ 17.49	¥ 18.81

Calculation of Net Debt

The following table shows the calculation of net debt for each of the periods indicated.

	As of December 31,			As of March 31,
	2018	2019	2020	2021
	(unaudited)	(unaudited)	(unaudited)	(unaudited)
		(millions of yen)		
Bonds and borrowings (current portion)	¥ 45,000	¥ 93,182	¥ 93,181	¥ 93,182
Add: Bonds and borrowings (non-current portion)	147,248	678,577	586,563	563,591
Subtract: Cash and cash equivalents	188,820	146,468	219,786	243,627
Net debt	¥ 3,428	¥ 625,291	¥ 459,958	¥ 413,146

PROPOSED ACQUISITION OF DIALOG

General

On February 8, 2021, Dialog and Renesas announced that they had reached agreement on the terms of a recommended cash acquisition by Renesas of the entire issued and to be issued share capital of Dialog in exchange for cash consideration (the “Dialog Acquisition”). Under the proposed terms of the Dialog Acquisition, each Dialog shareholder will be entitled to receive €67.50 in cash per share of Dialog’s common stock. This offer represents an estimated aggregate consideration of approximately €4.9 billion, or approximately ¥615.7 billion (using an exchange rate of 126 yen per Euro as of February 3, 2021).

The final aggregate value of the consideration to be reflected in our consolidated financial statements for the fiscal year in which the Dialog Acquisition is completed will depend on the exchange rates between the Euro and Japanese yen at the time of the closing of the acquisition. As discussed below, we expect to incur additional indebtedness to finance the Dialog Acquisition, which will result in an increase in interest costs in future periods.

The Dialog Acquisition is to be implemented by means of a Court-approved Scheme of Arrangement under Part 26 of the U.K. Companies Act 2006. On March 8, 2021, we sent the Scheme Document to the shareholders in relation to the Scheme, which sets out the full terms and conditions of the Scheme.

The Dialog Acquisition is subject to customary closing conditions, including the passing of certain resolutions by the Dialog shareholders at the Dialog general meeting and the court meeting, which were duly passed by the requisite majorities on April 9, 2021, various antitrust and other regulatory approvals and other customary conditions. Subject to these approvals and the satisfaction or waiver of the other conditions set out in the Scheme Document, the Scheme is expected to become effective by the end of 2021.

The Scheme Document provides that the offer for the Scheme may be terminated if the Dialog Acquisition has not been consummated by the long stop date of January 21, 2022, unless the long stop date is extended to a later date to be agreed upon by Dialog and Renesas (with the consent of the U.K. Panel on Takeovers and Mergers (the “Takeover Panel”), and relevant court approval (if such approval(s) are required)).

We will account for the Dialog Acquisition as a business combination and will record the assets acquired and liabilities assumed at fair value. We expect to record a significant amount of inventory, intangible assets, primarily intellectual property rights of Dialog related to its products and technology, in connection with the Dialog Acquisition. We also expect to record a significant amount of goodwill in connection with the acquisition reflecting the sum, by which the aggregate fair value of consideration for the Dialog Acquisition exceeds the fair value of the identifiable assets acquired and liabilities assumed as of the Dialog Acquisition date. Such intangible assets and goodwill will be presented on our consolidated statement of financial position as of the end of the fiscal period in which the Dialog Acquisition is completed.

As described under “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies—Impairment of Non-financial Assets,” goodwill and other intangible assets recorded in connection with the Dialog Acquisition will be held on our consolidated statement of financial position at the recorded value (or amortized value, in the case of intangible assets other than goodwill), less any accumulated impairment losses. If circumstances arise indicating that goodwill or intangible assets recorded in connection with the acquisition may be impaired, such as if we are unable to successfully realize the expected benefits of the acquisition and the carrying amount of goodwill or other intangible assets therefore exceeds their recoverable amount, we may be required to record an impairment loss up to the full value of such goodwill or other intangible assets shown on our consolidated statement of financial position.

Overview of Dialog

Dialog is an innovative provider of highly-integrated and power-efficient mixed-signal ICs for a broad array of customers within IoT, consumer electronics and high-growth segments of automotive and industrial end-markets. Centered around its low-power and mixed-signal expertise, Dialog brings a wide range of product offerings including battery and power management, power conversion, configurable mixed-signal IC (CMIC), LED drivers, custom mixed-signal ICs (ASICs), automotive power management ICs (PMICs) and more. Dialog also offers broad and differentiated Bluetooth Low Energy (BLE), WiFi and audio SoCs that deliver advanced connectivity for a wide range of applications; from smart home/building automation, wearables, to connected medical. Dialog was founded in 1985 and is headquartered in Reading, United Kingdom.

Selected Financial Information of Dialog

The table below sets forth certain selected consolidated financial data of Dialog for the periods indicated. The selected consolidated financial data set forth below for the fiscal year ended December 31, 2020 has been derived from, and should be read in conjunction with, Dialog's annual consolidated financial statements and the notes thereto contained elsewhere in this offering circular, which have been audited by Deloitte LLP, the independent auditor. The selected consolidated financial data as of and for the fiscal year ended December 31, 2019 has been derived from, and should be read in conjunction with, Dialog's consolidated financial statements as of and for the fiscal year ended December 31, 2020 (which include the comparative period as of and for the fiscal year ended December 31, 2019), included elsewhere in this offering circular. The selected consolidated financial data set forth below for the fiscal year ended December 31, 2018 have been derived from Dialog's annual consolidated financial statements and the notes thereto.

The selected consolidated financial data set forth below for the three months ended March 27, 2020 and April 2, 2021 have been derived in part from, and should be read in conjunction with, Dialog's unaudited quarterly condensed consolidated financial statements and the notes thereto contained elsewhere in this offering circular.

	For the fiscal year ended December 31,			For the three months ended,	
	2018	2019	2020	March 27, 2020	April 2, 2021
				(unaudited)	
Statement of Income Data:	(thousands of U.S. Dollars)				
Revenue	$ 1,442,138	$ 1,566,239	$ 1,375,924	$ 248,481	$ 365,863
Cost of sales	(751,070)	(717,703)	(697,805)	(124,676)	(184,008)
Gross profit	691,068	848,536	678,119	123,805	181,855
Selling and marketing expenses	(83,877)	(92,951)	(107,568)	(23,206)	(29,867)
General and administrative expenses	(84,351)	(101,587)	(103,221)	(19,205)	(35,390)
Research and development expenses	(326,309)	(313,550)	(325,860)	(72,345)	(81,560)
Operating profit	199,707	379,853	120,875	17,516	36,568
Profit before income taxes	196,193	385,038	116,903	19,542	36,891
Net income	139,799	301,452	84,495	13,599	26,114

Dialog's revenue for the fiscal year ended December 31, 2020 was $1,376 million, which was a decrease of 12.2% from revenue of $1,566 million in the fiscal year ended December 31, 2019. Revenue in the fiscal year ended December 31, 2019 included a perpetual IP license fee of $146 million in relation to the licensing arrangement with Dialog's largest customer that completed in April 2019. This decrease in revenue from the fiscal year ended December 31, 2019 was primarily due to lower license fees and a decline in revenue from the legacy licensed products that offset the performance of the rest of Dialog's business. Gross profit and operating profit for the fiscal year ended December 31, 2020 were also below the fiscal year ended December 31, 2019 due mainly to the positive impact from the perpetual IP license fee in 2019 as described above.

In addition, Dialog's operating profit for the fiscal year ended December 31, 2020 was affected by a $45 million impairment of goodwill as well as increased expenses as a result of certain business combinations and acquisitions.

Dialog's revenue for the three months ended April 2, 2021 was $366 million, which was an increase of 47% from revenue of $248 million in the three months ended March 27, 2020. Revenue increased due to strong performance across Dialog's product portfolio. Gross profit and operating profit for the three months ended April 2, 2021 were also higher than those profits for the three months ended March 27, 2020 due mainly to this increase in revenue.

Dialog also presents revenue, gross profit, operating profit, net income and EBITDA data as Non-IFRS figures, which it describes as underlying revenue, underlying gross profit, underlying operating profit, underlying net income and underlying EBITDA, respectively.

Non-IFRS measures

Dialog reports underlying measures of performance because they believe that such measures provide both their management and investors with useful additional information about the financial performance of their businesses. Underlying measures of performance represent the equivalent IFRS measures adjusted for specific items that are considered by Dialog to hinder comparison of the financial performance of its businesses from one period to another, with each other or with other similar businesses.

Underlying measures of performance reported by Dialog are non-IFRS measures because they exclude amounts that are included in, or include amounts that are excluded from, the most directly comparable measure calculated and presented in accordance with IFRS or are calculated using financial measures that are not calculated in accordance with IFRS. Dialog does not regard non-IFRS measures as a substitute for, or superior to, the equivalent IFRS measures. Non-IFRS measures presented by Dialog may not be directly comparable with similarly-titled measures used by other companies.

Underlying measures of performance exclude items that can have a significant effect on Dialog's profit or loss. Dialog compensates for these limitations by monitoring separately the items that are excluded from the equivalent IFRS measures in calculating the underlying measures.

Specific items of income and expense that were recognised in profit or loss in accordance with IFRS but, where applicable, were excluded by Dialog from their underlying results during the fiscal years ended December 31, 2020, 2019 and 2018 and the three months ended April 2, 2021 and March 27, 2020 are outlined below.

Licence and asset transfers to Apple. Dialog excluded from their underlying results the following discrete benefits that were recognised on completion of the licensing and asset transfer agreement with Apple in April 2019:

- the revenue attributed to the perpetual licence over their existing Power Management IP; and
- the gain on the transfer of design centre businesses.

Share-based compensation and related expenses. Dialog exclude the share-based compensation expense recognised in relation to options and other awards granted under the Company's share-based compensation plans because the awards are equity-settled and their effect on shareholders' returns is already reflected in diluted earnings per share measures. In 2019, Dialog also excluded discrete compensation payments to certain US persons following the modification of options awarded to them. Dialog additionally exclude the effect on profit or loss of changes in the accrual for payroll taxes payable on the exercise or vesting of such awards because the accrual fluctuates with the Company's share price and the effect on profit or loss is therefore not necessarily indicative of trading performance.

Business combinations. Dialog exclude those effects of applying the acquisition method of accounting under IFRS that they consider are not indicative of trading performance, including the accounting for transaction costs; the fair value adjustment to inventories of acquired businesses; the recognition of certain elements of the purchase price as compensation expense; and the recognition of remeasurements of contingent consideration in profit or loss.

During the periods under review, Dialog excluded from their underlying results the following items in relation to the accounting for business combinations:

- acquisition-related costs;
- the recognition in cost of sales of the consumption of the fair value uplift to inventory held by the acquired businesses at the acquisition date;
- the elements of deferred amounts payable acquired businesses that are recognised as compensation expense;
- credits recognised on the forfeiture of deferred consideration payable acquired businesses;
- the effect of changes in estimates of contingent consideration payable for acquired businesses; and
- the interest expense recognised on the unwinding of the discount on liabilities for contingent consideration.

Dialog also exclude from their underlying results the amortisation of identifiable intangible assets that are recognised in business combinations in order that the performance of those businesses that they have acquired may be compared fairly with those businesses that they have developed on an organic basis.

Integration costs. Dialog exclude the costs of integrating acquired businesses because they consider that they hinder the assessment of the financial performance of those businesses in comparison with others.

Consequences of the Covid-19 pandemic. Dialog excluded from their underlying results the following significant discrete items that arose principally from the Covid-19 pandemic:

- the impairment loss incurred in September 2020 on the provisional goodwill recognised on the acquisition of Adesto; and

- expenses incurred in relation to cost-reduction initiatives that commenced during 2020 in response to the pandemic (largely employee termination benefits).

Corporate transaction costs. Dialog exclude significant transaction costs and other discrete items recognised in relation to corporate transactions other than business combinations.

Strategic investments. Dialog excluded the effect on profit or loss of the measurement at fair value of certain warrants and options that they held in other companies for strategic reasons linked to their commercial partnerships with those companies. Since Dialog did not hold these instruments for trading purposes, they excluded fluctuations in their fair values when assessing their trading performance.

Effective interest on financial liabilities. Dialog excluded the non-cash element of the interest expense recognised in relation to a patent licensing agreement that was accounted for as a hire purchase contract prior to its expiry in 2018. Dialog considered that the cash interest payments were more indicative of the effect of this arrangement on shareholders' returns.

Income tax effect of underlying adjustments. Dialog calculated the income tax effect of underlying adjustments by considering the specific tax treatment of each item and by applying the relevant statutory tax rate to those items that are taxable or deductible for tax purposes.

Definition of Underlying Performance Measures

Underlying revenue excludes the discrete benefits that were recognised on completion of the licensing and asset transfer agreement with Apple in April 2019. Otherwise, there were no differences between Dialog's revenue and underlying revenue in the periods presented in this circular. Dialog monitor the change in underlying revenue from one period to another and over time because they consider this to be an important measure of the growth of their business.

Underlying gross profit is defined as gross profit excluding the discrete benefits of the licensing and asset transfer agreement with Apple, share-based compensation and related expenses, certain effects of accounting for business combinations and integration costs.

Underlying gross margin is underlying gross profit expressed as a percentage of underlying revenue. Dialog monitor underlying gross margin because they believe it provides a measure of the value that they add to their products.

Underlying operating profit is defined as operating profit excluding the discrete benefits of the licensing and asset transfer agreement with Apple, share-based compensation and related expenses, certain effects of accounting for business combinations, integration costs, the impairment of goodwill, expenses recognised in relation to cost-reduction initiatives and corporate transaction costs.

Underlying operating margin is underlying operating profit or loss expressed as a percentage of underlying revenue. Dialog monitor underlying operating margin because they believe it provides a measure of the overall profitability of their operations.

Underlying net income is defined as net income excluding the discrete benefits of the licensing and asset transfer agreement with Apple, share-based compensation and related expenses, certain effects of accounting for business combinations, integration costs, the impairment of goodwill, expenses recognised in relation to cost-reduction initiatives, corporate transaction costs, the effective interest expense on a patent licensing agreement that expired in 2018, changes in the fair value of strategic investments and the related income tax effects.

Underlying EBITDA is defined as underlying net income before net finance expense or income, income tax expense and depreciation and amortisation expenses.

Underlying EBITDA margin is underlying EBITDA expressed as a percentage of underlying revenue. Dialog present underlying EBITDA and underlying EBITDA margin because they believe these measures are useful to investors and other users of their financial information in evaluating the sensitivity of their trading performance to changes in variable operating expenses.

Underlying Revenue and Segment Revenue

The following tables provide Dialog's segment revenue and a reconciliation of Dialog's revenue to underlying revenue for each of the periods indicated.

	For the fiscal year ended December 31,			For the three months ended,	
	2018	**2019**	**2020**	**March 27, 2020[3]**	**April 2, 2021**
				(unaudited)	
Statement of Income Data:	**(thousands of U.S. Dollars)**				
Revenue	$ 1,442,138	$ 1,566,239	$ 1,375,924	$ 248,481	$ 365,863
Licence and asset transfers to Apple	—	(145,750)	—	—	—
Underlying revenue	$ 1,442,138	$ 1,420,489	$ 1,375,924	$ 248,481	$ 365,863
Segment Revenue:					
Custom Mixed Signal	1,042,320	962,476	804,699	147,825	187,691
Advanced Mixed Signal	244,536	253,415	274,593	51,528	80,801
Connectivity & Audio	154,004	183,781	195,540	34,716	57,039
Industrial IoT[1]	—	2,312	65,389	5,485	30,998
Corporate and other unallocated items[2]	1,278	18,505	35,703	8,927	9,334

Notes:

(1) Dialog created a new reporting segment called Industrial IoT which groups the businesses from its acquisitions of Creative Chips GmbH and Adesto Technologies Corporation.

(2) Unallocated revenue in 2020 and 2019 is revenue recognised on the effective IP licence granted to Apple.

(3) Comparative information for the three months ended March 27, 2020 has been restated to reflect the transfer of the Industrial Mixed Signal business unit from the Custom Mixed Signal segment to the Industrial IoT segment.

Underlying Gross Profit

The following table provides a reconciliation of Dialog's gross profit to underlying gross profit for each of the periods indicated.

	For the fiscal year ended December 31,			For the three months ended,	
	2018	**2019**	**2020**	**March 27, 2020**	**April 2, 2021**
				(unaudited)	
Statement of Income Data:	**(thousands of U.S. Dollars)**				
Gross profit	$ 691,068	$ 848,536	$ 678,119	$ 123,805	$ 181,855
Licence and asset transfers to Apple	—	(145,750)	—	—	—
Share-based compensation and related expenses	1,791	2,213	2,922	598	1,009
Accounting for business combinations	3,129	1,749	15,843	712	9
Integration costs	13	—	—	—	—
Underlying gross profit	$ 696,001	$ 706,748	$ 696,884	$ 125,115	$ 182,873

Underlying Operating Profit

The following table provides a reconciliation of Dialog's operating profit to underlying operating profit for each of the periods indicated.

	For the fiscal year ended December 31,			For the three months ended,	
	2018	2019	2020	March 27, 2020	April 2, 2021
				(unaudited)	
	(thousands of U.S. Dollars)				
Statement of Income Data:					
Operating profit	$ 199,707	$ 379,853	$ 120,875	$ 17,516	$ 36,568
Licence and asset transfers to Apple	—	(161,648)	—	—	—
Share-based compensation and related expenses	41,653	54,656	60,973	10,232	21,393
Accounting for business combinations	26,157	32,990	61,728	5,184	10,518
Integration costs	2,765	2,434	6,490	77	904
Impairment of goodwill	—	—	44,900	—	—
Cost-reduction initiatives	—	—	2,406	—	235
Corporate transaction costs	11,346	16,064	—	—	9,541
Underlying operating profit	$ 281,628	$ 324,349	$ 297,372	$ 33,009	$ 79,159

Underlying Net Income

The following table provides a reconciliation of Dialog's net income to underlying net income for each of the periods indicated.

	For the fiscal year ended December 31,			For the three months ended,	
	2018	2019	2020	March 27, 2020	April 2, 2021
				(unaudited)	
	(thousands of U.S. Dollars)				
Statement of Income Data:					
Net income	$ 139,799	$ 301,452	$ 84,495	$ 13,599	$ 26,114
Licence and asset transfers to Apple	—	(129,199)	—	—	—
Share-based compensation and related expenses	39,545	46,719	52,506	10,680	19,089
Accounting for business combinations	24,929	28,456	51,713	3,960	8,613
Integration costs	2,210	2,259	5,189	64	736
Impairment of goodwill	—	—	44,900	—	—
Cost-reduction initiatives	—	—	1,987	—	190
Corporate transaction costs	10,322	14,851	—	—	9,176
Effective interest	41	—	—	—	—
Strategic investments	8,523	(121)	(629)	(292)	—
Underlying net income	$ 225,369	$ 264,417	$ 240,161	$ 28,011	$ 63,918

Underlying EBITDA

The following table provides a reconciliation of Dialog's net income to underlying EBITDA for each of the periods indicated.

	For the fiscal year ended December 31,			For the three months ended,	
	2018	2019	2020	March 27, 2020	April 2, 2021
				(unaudited)	
	(thousands of U.S. Dollars)				
Statement of Income Data:					
Net income	$ 139,799	$ 301,452	$ 84,495	$ 13,599	$ 26,114
Net finance expense (income)	3,514	(5,185)	3,972	(2,026)	(323)
Income tax expense	55,281	83,586	32,408	5,943	10,777
Depreciation expense	31,455	39,611	35,544	8,434	9,006
Amortisation expense	49,130	52,233	60,903	13,097	16,650
EBITDA	279,179	471,697	217,322	39,047	62,224
Licence and asset transfers to Apple	—	(161,648)	—	—	—
Share-based compensation and related expenses	41,653	54,656	60,973	10,232	21,393
Acquisition-related costs	—	4,040	9,145	2,419	—
Consumption of the fair value uplift of acquired inventory	3,129	1,750	15,257	712	—
Consideration accounted for as compensation expense	1,481	1,204	7,482	260	57
Forfeiture of deferred consideration	(204)	(116)	(55)	(23)	—
Remeasurement of contingent consideration	(878)	—	(6,938)	(5,347)	—
Integration costs	2,765	2,434	6,490	77	904
Impairment of goodwill	—	—	44,900	—	—
Cost-reduction initiatives	—	—	2,406	—	235
Corporate transaction costs	11,346	16,064	—	—	9,541
Share of loss of associate	1,113	—	—	—	—
Underlying EBITDA	$ 339,584	$ 390,081	$ 356,982	$ 47,377	$ 94,354

Strategic Objective of the Dialog Acquisition

We believe that the complementary nature of the companies' technological assets and the scale of the combined portfolios will enable Renesas to build more robust and comprehensive solutions to serve high-growth segments of the IoT and automotive sectors.

We believe that there is a compelling strategic and financial rationale for the Dialog Acquisition due to the following key reasons:

- *Scales our IoT sector capabilities with Dialog's low-power technologies.* Dialog has a differentiated portfolio of low-power mixed-signal products, decades of experience in developing custom and configurable solutions for the world's largest customers and expertise in low-power connectivity that are highly complementary to us. We believe that the acquisition of these low-power technologies will enhance our product portfolio and help our expansion into high-growth markets in the IoT field.

- *Unlocks further differentiation to our system solutions with connectivity.* We believe that bringing together Renesas and Dialog will extend the combined group's reach to a broader customer base and open up additional growth potential in the key growth segments: industrial infrastructure, IoT and automotive. Dialog's BLE, WiFi and audio SoCs are highly complementary to our MCU-based solutions. Combining Dialog's innovative low-power Wi-Fi and Bluetooth® SoC and expertise with our technologies will enable us to further differentiate our system solution offerings and extend our footprint in high-growth segments, including contactless IoT applications for smart home/building automation and healthcare. Our automotive solutions will also be enriched with connectivity for a wide range of security and safety applications.

- *Adds engineering and design scale and more effective go-to-market initiatives.* Our prior acquisitions of Intersil and IDT in 2017 and 2019, respectively, brought diverse talent and management capabilities to expand our global operations. The acquisition of Dialog extends this effort and enables us to add engineering and design scale in low-power analog and mixed-signal. The addition of Dialog's strong R&D and geographical presence will also allow us to expand our "Winning Combinations" lineup of innovative solutions and make our go-to-market initiatives more effective to provide seamless and borderless services to customers around the globe.

- *Delivers earnings accretion and cost savings.* We are targeting incremental revenue growth of approximately $200 million from cross selling and access to fast-growing industries alongside continued innovation of solution offerings. We are also targeting cost savings from operational efficiencies to result in a financial impact of approximately $125 million. We are targeting the cost savings to be fully realized in approximately three years after closing, and revenue growth to be fully realized in approximately four to five years after closing.

The discussion above includes forward-looking statements, such as the anticipated synergies with Dialog, that are based on various assumptions and beliefs, including but not limited to the assumptions set forth above as well as the non-occurrence of the various risks set forth in "Risk Factors—Risks Related to Our Proposed Acquisition of Dialog" and elsewhere in this offering circular. These and other unanticipated events and circumstances could affect our ability to achieve the strategic objectives or synergies set forth above. As a result, we cannot and do not make any representation or assurance as to the achievability of such strategic objectives or synergies or whether our underlying assumptions are appropriate. You should be aware that actual results may vary, potentially materially, from the above forward-looking statements. See "Forward-Looking Statements."

Financing of the Dialog Acquisition

We intend to finance the cash consideration payable pursuant to the Dialog Acquisition from the proceeds of the global offering as well as from third-party debt. We entered into a bridge facilities agreement in February 2021 with MUFG Bank, Ltd. and Mizuho Bank, Ltd. in the aggregate amount of ¥735.4 billion, which is described in greater detail in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Bridge Facilities Agreement." As described in "Use of Proceeds" above, we intend to use the proceeds of the global offering to satisfy in part the cash consideration payable to Dialog's shareholders under the terms of the Dialog Acquisition, thereby reducing the amounts to be drawn under the Bridge Facilities Agreement, or for the repayment of borrowings then already made under the Bridge Facilities Agreement.

Unaudited Pro Forma Financial Information

The following unaudited pro forma condensed Consolidated Statement of Financial Position as of December 31, 2020 reflects the acquisition of Dialog as if it had occurred on December 31, 2020. The following unaudited pro forma condensed Consolidated Statement of Profit or Loss for the fiscal year ended December 31, 2020 reflects the acquisition of Dialog as if it had occurred on January 1, 2020. We have prepared the unaudited pro forma condensed consolidated financial information for the fiscal year ended December 31, 2020 based on (i) our audited consolidated statement of operations for the fiscal year ended December 31, 2020, which were prepared in accordance with IFRS and (ii) the audited consolidated financial statements of Dialog for the fiscal year ended December 31, 2020, which were prepared in accordance with IFRS as adopted by the European Union.

The unaudited pro forma condensed consolidated financial information presented in this offering circular has not been audited or been subject to review procedures specified by review standards by our independent auditor, nor have they been presented in compliance with the guidelines of any regulatory body or stock exchange. Future results may vary significantly from the results reflected in the unaudited pro forma condensed consolidated financial information due to a variety of factors, including those described in "Risk Factors—Risks Related to Our Proposed Acquisition of Dialog."

We have made certain adjustments to the information contained in our and Dialog's consolidated financial statements in preparing the unaudited pro forma condensed consolidated financial information. Based on these adjustments made in the unaudited pro forma condensed consolidated financial information, for the fiscal year ended December 31, 2020:

- our revenue would have increased 20.6% from ¥715,673 million on a historical basis to ¥863,268 million on a pro forma basis;

- our gross profit would have increased 21.7% from ¥335,689 million on a historical basis to ¥408,430 million on a pro forma basis;

- our operating profit would have increased 19.9% from ¥65,142 million on a historical basis to ¥78,108 million on a pro forma basis;

- our profit would have increased 13.6% from ¥45,726 million on a historical basis to ¥51,948 million on a pro forma basis;

- our total assets would have increased 34.1% from ¥1,608,985 million on a historical basis to ¥2,157,617 million on a pro forma basis; and

- our total liabilities would have increased 55.5% from ¥989,324 million on a historical basis to ¥1,537,956 million on a pro forma basis.

The unaudited pro forma condensed consolidated financial information is as follows:

UNAUDITED PRO FORMA CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2020

	Renesas	Dialog[(1)]	Dialog after translation[(2)]	Pro forma Adjustments	Notes	Pro forma Condensed Consolidated Statement of Financial Position
	(millions of yen)	(thousands of U.S. Dollars)	(millions of yen)	(millions of yen)		(millions of yen)
Assets						
Cash and cash equivalents	¥ 219,786	$ 523,880	¥ 54,222	¥ (120,000)	3.2)	¥ 154,008
Other assets	1,389,199[(3)]	1,597,638[(6)]	165,355	449,055	3.1)	2,003,609
Total assets	¥ 1,608,985	$ 2,121,518	¥ 219,577	¥ 329,055		¥ 2,157,617
Liabilities and Equity						
Bonds and borrowings	¥ 679,744[(4)]	$ 1,149[(7)]	¥ 119	¥ 500,299	3.2)	¥ 1,180,162
Other liabilities	309,580[(5)]	465,841[(8)]	48,214	—		357,794
Total liabilities	¥ 989,324	$ 466,990	¥ 48,333	¥ 500,299		¥ 1,537,956
Equity						
Total equity	¥ 619,661	$ 1,654,528	¥ 171,244	¥ (171,244)	3.1)	¥ 619,661
Total liabilities and equity	¥ 1,608,985	$ 2,121,518	¥ 219,577	¥ 329,055		¥ 2,157,617

Notes:

(1) Figures included in the table for Dialog have been taken directly from Dialog's published consolidated balance sheet or, as described in the footnotes below, show the aggregation of items taken directly from Dialog's published consolidated balance sheet, and have not been adjusted to align with Renesas' accounting policies or classification of the Consolidated Statement of Financial Position of Renesas as of December 31, 2020.

(2) Figures in the column of "Dialog after translation" are Japanese yen equivalents of the U.S. dollar figures in the column of "Dialog" based on the exchange rate of ¥103.50 = U.S.$1 (the exchange rate as of December 31, 2020).

(3) Other assets of Renesas mainly consist of goodwill and intangible assets from the Intersil and IDT acquisitions. Other assets include all current and non-current assets except for cash and cash equivalents.

(4) Bonds and borrowings of Renesas consist of bonds and borrowings (current) of ¥93,181 million and bonds and borrowings (non-current) of ¥586,563 million.

(5) The largest component within other liabilities of Renesas is trade and other payables. Other liabilities include all current and non-current liabilities except for bonds and borrowings.

(6) Other assets of Dialog mainly consist of goodwill and other intangible assets. Other assets include all current and non-current assets except for cash and cash equivalents.

(7) Bonds and borrowings of Dialog consist of bank loans (current) of $697 thousand and bank loans (non-current) of $452 thousand.

(8) The largest component within other liabilities of Dialog is trade and other payables. Other liabilities include all current and non-current liabilities except for bonds and borrowings.

UNAUDITED PRO FORMA CONDENSED CONSOLIDATED STATEMENT OF PROFIT OR LOSS FOR THE FISCAL YEAR ENDED DECEMBER 31, 2020

	Renesas	Dialog[(1)]	Dialog after translation[(2)]	Pro forma Adjustments	Notes	Pro forma Condensed Consolidated Statement of Profit or Loss
	(millions of yen, except per share information)	(thousands of U.S. Dollars)	(millions of yen)	(millions of yen)		(millions of yen, except per share information)
Revenue	¥ 715,673	$ 1,375,924	¥ 147,595	¥ —		¥ 863,268
Cost of sales	(379,984)	(697,805)	(74,854)	—		(454,838)
Gross profit	335,689	678,119	72,741	—		408,430
Selling, general and administrative expenses (excluding research and development expenses)	(133,031)[(3)]	(210,789)[(4)]	(22,611)	—		(155,642)
Research and development expenses	(133,237)	(325,860)	(34,955)	—		(168,192)
Other income	4,036	24,305[(5)]	2,607	—		6,643
Other expenses	(8,315)	(44,900)[(6)]	(4,816)	—		(13,131)
Operating profit	65,142	120,875	12,966	—		78,108
Finance income	7,623	6,086[(7)]	653	—		8,276
Finance costs	(7,549)	(10,058)[(8)]	(1,079)	(4,147)	3.4)(i)	(12,775)
Profit before tax	65,216	116,903	12,540	(4,147)		73,609
Income tax expense	(19,490)	(32,408)	(3,476)	1,305	3.4)(ii)	(21,661)
Profit	¥ 45,726	$ 84,495	¥ 9,064	¥ (2,842)		¥ 51,948
Attributable to:						
Owners of parent	45,626	84,495	9,064	(2,842)		51,848
Non-controlling interests	100	—	—	—		100
Basic earnings per share (EPS)	¥ 26.54	—	—	—		¥ 30.16[(9)]

Notes:

(1) Figures included in the table for Dialog have been taken directly from Dialog's published consolidated statement of income or, as described in the footnotes below, show the aggregation of items taken directly from Dialog's published consolidated statement of income, and have not been adjusted to align with Renesas' accounting policies or classification of the Consolidated Statement of Profit or Loss of Renesas for the fiscal year ended December 31, 2020.

(2) Figures in the column of "Dialog after translation" are Japanese yen equivalents of the U.S. dollar figures in the column of "Dialog" based on the exchange rate of ¥107.27 = U.S.$1 (the average rate for the fiscal year ended December 31, 2020).

(3) Research and development expenses of ¥133,237 million have been deducted from selling, general and administrative expenses of ¥266,268 million for the fiscal year ended December 31, 2020.

(4) Selling, general and administrative expenses (excluding research and development expenses) of Dialog consist of $107,568 thousand of selling and marketing expenses and $103,221 thousand of general and administrative expenses for the fiscal year ended December 31, 2020.

(5) Other income of Dialog consists of $14,828 thousand of contributions to product development costs, $6,938 thousand of change in estimate of contingent consideration, and $2,539 thousand of rental and other income for the fiscal year ended December 31, 2020.

(6) Other expenses of Dialog consist of $44,900 thousand of impairment of goodwill for the fiscal year ended December 31, 2020.

(7) Finance income of Dialog consists of $6,086 thousand of interest income for the fiscal year ended December 31, 2020.

(8) Finance costs of Dialog consist of $8,173 thousand of interest expense and $1,885 thousand of other finance expense for the fiscal year ended December 31, 2020.

(9) Basic earnings per share (EPS) is calculated by dividing profit attributable to owners of parent by the weighted average number of shares of common stock of Renesas outstanding during the fiscal year ended December 31, 2020, before dilution (1,719,344,659 shares of Renesas). The basic EPS figure above does not reflect the impact of the new share issuance in this global offering.

Additional Adjusted Financial Information on a Simple Combined Basis (with Finance Cost Adjustments) for the Fiscal Year Ended December 31, 2020

The below table represents certain additional adjusted financial information of Renesas and Dialog, which we have prepared by simple aggregation of Renesas' adjusted and Dialog's underlying financial figures for the fiscal year ended December 31, 2020, with an adjustment for the finance costs that would have been incurred by Renesas to finance the acquisition if it had occurred on January 1, 2020. The adjusted figures of Renesas and Dialog used in the table below are derived from the adjusted/underlying figures from the corporate disclosures of the two companies without reconciling any differences between the respective adjustment methods and without applying any pro forma adjustments other than for finance costs related to the acquisition. Therefore, these figures may not be an accurate representation of our actual combined adjusted figures after the acquisition of Dialog.

	Renesas[(1)]	Dialog[(2)]	Dialog after translation[(3)]	Adjustments for finance costs	Notes	Simple combined adjusted figures (with finance cost adjustments)
	(Adjusted)	(Underlying)	(Underlying)			(Adjusted)
	(millions of yen, except per share information)	(thousands of U.S. Dollars)	(millions of yen, except per share information)	(millions of yen, except per share information)		(millions of yen, except per share information)
Adjusted profit / underlying net income	¥ 111,484	$ 240,161	¥ 25,762	¥ (2,842)[(4)]		¥ 134,404[(5)]
Adjusted / underlying EBITDA	¥ 223,247	$ 356,982	¥ 38,293	—		¥ 261,540
Adjusted EPS	¥ 64.84	—	¥ 14.98	¥ (1.65)		¥ 78.17[(6)]

Notes:

(1) All figures in the column of "Renesas" are adjusted figures. Adjusted profit, adjusted EBITDA and adjusted EPS are non-GAAP financial measures of Renesas, which are not financial measures presented in accordance with IFRS and should not be considered in isolation or as a substitute for the figures prepared in accordance with IFRS. See "Selected Financial and Other Data—Non-GAAP Measures."

(2) The adjusted profit / underlying net income and adjusted / underlying EBITDA figures in the column of "Dialog" represent Dialog's Non-IFRS underlying net income and underlying EBITDA, respectively. See "—Selected Financial Information of Dialog—Non-IFRS Measures." In addition, all underlying figures included in the table for Dialog are as published by Dialog and have not been adjusted to align with Renesas' accounting policies, adjustment methods or classification of the Consolidated Statement of Profit or Loss of Renesas for the fiscal year ended December 31, 2020.

(3) Figures in the column of "Dialog after translation" are Japanese yen equivalents of the U.S. dollar figures in the column of "Dialog" based on the exchange rate of ¥107.27 = U.S.$1 (the average rate for the fiscal year ended December 31, 2020).

(4) Adjusted profit is calculated by deducting finance costs consisting of interest expense of ¥4,147 million minus the related tax effect of ¥1,305 million (assuming an annual interest rate for additional debt of 0.829% and Renesas' statutory tax effective rate of 31.46% in the fiscal year ended December 31, 2020).

(5) In light of how we plan to use the proceeds from the global offering to fund the Dialog Acquisition, had the offering been consummated by the beginning of the fiscal year ended December 31, 2020, the simple combined adjusted profit figure would be ¥135,617 million, reflecting a reduction in the finance costs described in footnote 4 above by ¥1,213 million.

(6) Upon further adjusting the number of our outstanding shares for the new shares to be issued in the global offering, adjusted EPS would be ¥71.33, which is calculated by dividing the ¥135,617 million in the simple combined adjusted profit figure shown in footnote 5 above by the weighted average number of shares of common stock outstanding during the fiscal year ended December 31, 2020 plus the 182 million new shares of Renesas to be issued in this offering. This number of new shares assumes that the over-allotment option is not exercised.

Notes to the Unaudited Pro Forma Condensed Consolidated Financial Information

1. Acquisition of Dialog

On February 8, 2021, Renesas reached an agreement with Dialog in the United Kingdom, on the terms of a recommended all-cash acquisition by Renesas of the entire issued and to be issued share capital of Dialog, thereby making Dialog a wholly-owned subsidiary of Renesas by December 31, 2021.

2. Basis of Presentation

1) Accounting Standard

The audited consolidated financial statements of Renesas as well as Dialog for the fiscal year ended December 31, 2020 were prepared in accordance with IFRS.

2) Accounting Period

The fiscal year for Renesas and Dialog begins on January 1 and ends on December 31.

The unaudited pro forma condensed consolidated financial information has been prepared based on the Consolidated Statement of Financial Position and Consolidated Statement of Profit or Loss as of and for the fiscal year ended December 31, 2020 of Renesas, and the Consolidated Statement of Financial Position and Consolidated Statement of Profit or Loss as of and for the fiscal year ended December 31, 2020 of Dialog.

The unaudited pro forma condensed consolidated financial information consists of an unaudited pro forma condensed Consolidated Statement of Financial Position and an unaudited pro forma condensed Consolidated Statement of Profit or Loss. The unaudited pro forma condensed consolidated financial information shows the effect of the Dialog Acquisition on certain specified items of Statement of Financial Position and Statement of Profit or Loss.

The unaudited pro forma condensed Consolidated Statement of Financial Position has been prepared by combining certain specified items of the Consolidated Statement of Financial Position of Renesas as of December 31, 2020 and the Consolidated Statement of Financial Position of Dialog as of December 31, 2020, assuming that the Dialog Acquisition was completed on December 31, 2020, and applying certain adjustments as described in detail below.

The unaudited pro forma condensed Consolidated Statement of Profit or Loss has been prepared by combining certain specified items of the Consolidated Statement of Profit or Loss of Renesas for the fiscal year ended December 31, 2020 and the Consolidated Statement of Profit or Loss of Dialog for the fiscal year ended December 31, 2020, assuming that the Dialog Acquisition was completed on January 1, 2020, and applying certain adjustments as described in detail below.

The respective Consolidated Statement of Financial Positions and Consolidated Statement of Profit or Loss of Renesas and Dialog, which are used for the preparation of the unaudited pro forma condensed consolidated financial information, are based on the following information:

- Audited Consolidated Statement of Financial Position and Consolidated Statement of Profit or Loss of Renesas as of and for the fiscal year ended December 31, 2020 included in the annual securities report filed with the Director of the Kanto Local Finance Bureau of the Ministry of Finance of Japan on March 31, 2021 pursuant to the FIEA, and elsewhere in this offering circular.

- Audited Consolidated Statement of Financial Position and Consolidated Statement of Profit or Loss of Dialog as of and for the fiscal year ended December 31, 2020 included elsewhere in this offering circular.

3) Currency Translation

The consolidated financial statements of Renesas are denominated in Japanese yen and the consolidated financial statements of Dialog are denominated in U.S. dollars. Since the publicized consolidated financial statements of Dialog are denominated in U.S. dollars, an exchange rate of ¥103.50 to $1.00 as of

December 31, 2020 and an exchange rate of ¥107.27 to $1.00 as the average rate for the fiscal year ended December 31, 2020 are used to translate the unaudited pro forma condensed consolidated financial information to Japanese yen.

3. Pro Forma Adjustments

1) Purchase Price Allocation under Acquisition Method

Renesas expects to pay approximately €4,886 million (approximately ¥620,299 million based on an exchange rate of ¥126.95 to €1.00 as of December 31, 2020) in cash consideration to shareholders of Dialog for the acquisition of all the issued and to be issued share capital of Dialog.

The number of shares is the fully-diluted basis as of December 31, 2020 and the actual number of shares may be materially different from the number of shares used for the unaudited pro forma condensed consolidated financial information. In addition, the purchase price for the Dialog Acquisition is denominated in Euros and is subject to foreign exchange fluctuations between the yen and the Euro.

Renesas has not completed the purchase price allocation in connection with the acquisition of Dialog. Therefore, ¥449,055 million of other assets in Pro forma Adjustments on the unaudited pro forma condensed Consolidated Statement of Financial Position contains the difference between ¥620,299 million of the acquisition consideration and ¥171,244 million of Dialog's total equity, which may include amounts that would ultimately be characterized as goodwill, intangible assets and inventory among others in connection with the acquisition of Dialog. Renesas expects to reallocate or otherwise adjust the respective amounts of goodwill, intangible assets and inventory among others as it completes the purchase price allocation.

A purchase price allocation requires valuation of assets to be acquired and liabilities to be assumed by the acquirer through an acquisition. The actual valuation of assets to be acquired and liabilities to be assumed by Renesas may be materially different from information included in the unaudited pro forma condensed consolidated financial information since the actual valuation will be made after the Dialog Acquisition is completed based on IFRS. Material differences may arise as a result of a number of factors, including changes in the assets and liabilities after the date of the Consolidated Statement of Financial Position of Dialog, changes in the market value of such assets and liabilities and changes in exchange rates. As a result, the purchase price allocation performed after the completion of the Dialog Acquisition is expected to be materially different from information included in the unaudited pro forma condensed consolidated financial information.

(i) Intangible assets

Intangible assets to be recognized in the Dialog Acquisition may include the value of developed technology, in-process research and development, customer contracts and related relationships, order backlog, etc. held by Dialog as of the closing date of the Dialog Acquisition. Certain intangible assets will be amortized over the term of its useful life and may have a significant impact on the Consolidated Statement of Profit or Loss after completion of the Dialog Acquisition. However, the impact of the amortization from intangible assets to be recognized on Consolidated Statement of Profit or Loss is not included in the unaudited pro forma condensed consolidated statement of profit or loss because Renesas has not completed the purchase price allocation in connection with the acquisition of Dialog.

(ii) Inventory

Inventories are stated at fair value, and fair value adjustment for the inventories is recognized on Consolidated Statement of Financial Position and Consolidated Statement of Profit or Loss over the period these are sold.

However, the impact of step-up of inventories to be recognized on Consolidated Statement of Financial Position and Consolidated Statement of Profit or Loss are not included in the unaudited pro forma condensed consolidated statement of profit or loss because Renesas has not completed the purchase price allocation in connection with the acquisition of Dialog.

2) Acquisition of Shares of Dialog

It is assumed that Renesas will raise ¥120,000 million by the use of its own funds and ¥500,299 million by bank borrowing to acquire all the issued shares of Dialog for the amount of approximately €4,886 million (approximately ¥620,299 million based on an exchange rate of ¥126.95 to €1.00 as of December 31, 2020).

To procure the funds for the Dialog Acquisition, Renesas entered into a loan agreement (Bridge Facilities Agreement) as described below on February 8, 2021.

(1) Borrowing limit: ¥735,400 million

(2) Execution date of agreement: February 8, 2021

(3) Period of loan execution: from the execution date of the Bridge Facilities Agreement until February 3, 2022

(4) Repayment date: February 7, 2022

(5) Participating financial institutions: MUFG Bank, Ltd. and Mizuho Bank, Ltd.

3) Acquisition Expenses

Renesas and Dialog will pay acquisition expenses in relation to the Dialog Acquisition. However, adjustments in relation to the acquisition expenses are not reflected for the purpose of preparing the unaudited pro forma condensed consolidated financial information because the acquisition expenses are yet to be determined.

4) Interest Expense and Income Tax Expense

(i) In the pro forma adjustments, interest expense of ¥4,147 million from bank loans of ¥500,299 million is recorded within finance costs. The interest rate is assumed to be the same as that of the current loan agreement, and the amount of actual interest expense may be different from our current estimates due to further refinancing of commitments under the bridge facility agreement.

(ii) In the pro forma adjustments, income tax expense of ¥1,305 million is calculated by multiplying ¥4,147 million by Renesas' statutory effective tax rate of 31.46% in the fiscal year ended December 31, 2020.

Certain Terms of the Scheme of Agreement

At the Dialog general meeting and at the court meeting held on April 9, 2021, all resolutions proposed in connection with the Scheme were duly passed by the requisite majorities and, accordingly, the Scheme has been approved by Dialog's shareholders.

As set out in the Scheme Document, the Dialog Acquisition remains subject to the satisfaction (or, if capable, waiver) of the remaining conditions, including certain competition and regulatory approvals as well as the Court's sanction of the Scheme at the court sanction hearing, which are described in more detail below.

Conditions to the Acquisition

The Dialog Acquisition and, accordingly, the Scheme are subject to a number of conditions, including, among other things, the following events occurring on or before the long-stop date:

- certain competition and regulatory approvals (including in, among other jurisdictions, Germany, the People's Republic of China, Taiwan and the United States);

- the satisfaction or (where applicable) waiver, prior to the sanction of the Scheme by the Court, of all the other conditions (including standard representations and warranties of Dialog such as the lack of any adverse change, material litigation proceedings, non-compliance with regulation or legislation, material environmental issues, anti-corruption, sanctions and other related conditions);

- the sanction of the Court (with or without modification but subject to any modification being on terms acceptable to Renesas and Dialog); and

- the delivery of a copy of the court order to the Registrar of Companies.

The Dialog Acquisition can only become effective in accordance with its terms if all the conditions, including those above, have been satisfied or, if capable of waiver, waived. If any condition is not capable of being satisfied (or, if capable of waiver, waived) by the date specified therein, Renesas will make an announcement through a Regulatory Information Service as soon as practicable and, in any event, by no later than 8.00 a.m. on the business day following the date so specified, stating whether Renesas has invoked that condition, waived that condition or, with the agreement of Dialog, specified a new date by which that condition must be satisfied.

Renesas may not invoke a condition so as to cause the Dialog Acquisition not to proceed, to lapse or to be withdrawn unless the circumstances which give rise to the right to invoke the condition are of material significance to Renesas in the context of the Dialog Acquisition. The condition relating to the sanction of the Scheme by the Court, amongst others, are not subject to this requirement.

Regulatory and Antitrust Conditions

The relevant regulatory and antitrust approvals that are necessary as a closing condition to the Dialog Acquisition are set out below:

- *Germany*
  - Notification having been received from the German Federal Cartel Office (FCO) that, with respect to the Dialog Acquisition, the requirements for the prohibition of a merger set out in Section 36(1) GWB (*Gesetz gegen Wettbewerbsbeschränkungen*, Act against Restraints of Competition) are not fulfilled, or notification not having been received from the FCO within one month of receipt of a completed filing that it intends to open an investigation, or the FCO not having delivered a decision pursuant to Section 40(2)(1) GWB within the period defined in Section 40(2) GWB, or the FCO having cleared the Dialog Acquisition within the period defined in Section 40(2) GWB, or the FCO having declared in writing that the Dialog Acquisition does not fall within the scope of the German merger control regime; and
  - (following notification to the German Ministry of Economics and Energy (*Bundesministerium für Wirtschaft und Energie*—"BMWi"); (i) the Dialog Acquisition having been cleared by the BMWi under the current or amended provisions of the German Foreign Trade and Payments Act (*Außenwirtschaftsgesetz*—"AWG") and the Foreign Trade and Payments Ordinance (*Außenwirtschaftsverordnung*—"AWV") as applicable to the Dialog Acquisition; (ii) a certificate of non-objection having been granted; (iii) the applicable review periods having expired or elapsed without the BMWi having delivered a decision under the current or amended provisions of the AWG and the AWV; or (iv) the BMWi having declared in writing that the Acquisition does not fall within the scope of the German foreign investment regime stipulated in the AWG and AWV.
- *People's Republic of China*
  - (i) Notification having been accepted by the State Administration for Market Regulation ("SAMR") pursuant to the Anti-Monopoly Law of the People's Republic of China ("Anti-Monopoly Law"), and (ii) SAMR having cleared the Dialog Acquisition for purposes of the Anti-Monopoly Law or SAMR having failed to make a written decision within the period of time defined in Article 25 and Article 26 of the Anti-Monopoly Law; and
  - any other relevant authority in the People's Republic of China that has commenced consideration of, or has been requested in writing to consider, the Acquisition after the date of the Announcement (including but not limited to, following a reference of, or recommendation to consider, the Acquisition by SAMR), having cleared the Dialog Acquisition.
- *South Korea*
  - If, in the reasonable opinion of Dialog, approval from the Korean Ministry of Trade, Industry and Energy ("MOTIE") is required for the Acquisition (or any matter arising from or related to the Acquisition), and the corresponding filing(s) has/have been made, receipt of either: (i) a copy of the letter issued by MOTIE that the Company does not own any technology that can be deemed as a national core technology ("NCT") (as defined under the Act on

Prevention of Leakage and Protection of Industrial Technology); or (ii) in the event MOTIE determines that the Company owns NCT, a copy of a clearance letter approving the consummation of the transactions contemplated hereby or the applicable review period having expired or lapsed.

- *Taiwan*

  - The Taiwan Fair Trade Commission ("TFTC") having made no objection to the Dialog Acquisition during the 30 day waiting period (or plus an additional up to 60 day waiting period if so extended by the TFTC) after its receipt of a complete combination notification from Renesas pursuant to Article 11 of the Fair Trade Act of Taiwan.

- *United Kingdom*

  - If (i) a public interest intervention notice relating to the Acquisition is issued under Section 42(2) of the Enterprise Act 2002 ("EA"), a UK Secretary of State having taken a decision to approve the Dialog Acquisition (by a decision not to make a reference under Section 45 of the EA or otherwise); or (ii) any new or amended national security, public interest or foreign investment laws, rules or regulations (including the proposed National Security and Investment Bill) become effective in the United Kingdom after the date of the announcement that make it legally required to notify the Dialog Acquisition, either (i) the relevant authority indicating that it has determined to approve the Dialog Acquisition or (ii) all applicable review periods having expired or elapsed.

- *United States*

  - All necessary notifications and filings having been made pursuant to the US Hart-Scott-Rodino Antitrust Improvements Act of 1976 (as amended) and the rules and regulations promulgated thereunder; and all applicable waiting periods (including any extensions thereof) relating to the Dialog Acquisition have expired, lapsed or been terminated; and no judgment, order or injunction having been made by a court of competent jurisdiction in the United States that prohibits the consummation of the Dialog Acquisition; and

  - (i) in the event that the parties have filed a joint voluntary notice with the Committee on Foreign Investment in the United States (and each member agency thereof, acting in such capacity) ("CFIUS") pursuant to 31 C.F.R. § 800.501 in relation to the Dialog Acquisition, that (i) CFIUS has issued a written notice to the parties that it has concluded all action pursuant to section 721 of the United States Defense Production Act of 1950, as amended and codified at 50 U.S.C. Section 4565 and has determined that there are no unresolved national security concerns with respect to the Dialog Acquisition; or (ii) CFIUS has sent a report to the President of the United States (the "President") requesting the President's decision and either (A) the President has announced a decision not to take any action to suspend or prohibit the Dialog Acquisition or (B) the President has not taken any action within 15 days from the earlier of the date CFIUS completed its investigation of the Dialog Acquisition or the date CFIUS sent its report to the President.

Modifications to the Scheme

The Scheme also contains a provision for Dialog and Renesas jointly to consent (on behalf of all persons concerned) to any modification of, or addition to, the Scheme or to any condition approved or imposed by the Court. The Court would be unlikely to approve any modification of, or additions to, or impose a condition to the Scheme which would be material to the interests of Dialog's shareholders unless Dialog's shareholders were informed of any such modification, addition or condition and given the opportunity to vote on that basis. It would be a matter for the Court to decide, in its discretion, whether or not a further meeting of Dialog's shareholders should be held in these circumstances.

Alternative Means of Implementing the Acquisition

Renesas reserves the right to elect (with the consent of the Takeover Panel and subject to the terms of the Co-operation Agreement separately entered into between Renesas and Dialog) to implement the Dialog

Acquisition by way of a takeover offer as defined in Part 28 of the U.K. Companies Act 2006, or a Takeover Offer, as an alternative to the Scheme. In such event, the Dialog Acquisition will be implemented on substantially the same terms and subject to substantially the same conditions as those applying to the Scheme, so far as applicable and subject to appropriate amendments. The acceptance condition would be set at 90% of the shares to which such Takeover Offer relates (or such other lesser percentage as the Takeover Panel may require or as Renesas may decide with the consent of the Takeover Panel provided that if it became or was declared unconditional in all respects, the Takeover Offer would result in Renesas holding Dialog shares carrying greater than 50% of the voting rights in Dialog). Further, if sufficient acceptances of the Takeover Offer were received and/or sufficient Dialog shares were otherwise acquired, it would be the intention of Renesas to apply the provisions of the U.K. Companies Act 2006 to compulsorily acquire any outstanding Dialog shares to which such Takeover Offer relates.

Notice to Investors

We may be required by the Takeover Panel to disclose details of any of our shareholders that, following the offering described herein, will have a potential direct or indirect interest of 5% or more in any part of the capital of Dialog upon completion of the Dialog Acquisition. If a potential investor acquires shares in the global offering which results in such investor holding a 5% or more interest in the capital of Renesas, such investor may be deemed to have an expected indirect interest of 5% or more in the capital of Dialog upon completion of the Dialog Acquisition. If this threshold is reached by a Renesas shareholder as a result of the offering, we may be required to publicly disclose the identity of such Renesas shareholder and details of this shareholding.

Similarly, due to various other regulatory requirements related to the Dialog Acquisition, if as a result of the global offering, a shareholder (including other shareholders in the same corporate group) holds or is expected to hold Renesas shares above a specified percentage threshold (ranging from 1% to 9.9% depending on the relevant regulatory requirement), we may be required to disclose information regarding the shareholder to the relevant regulator.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with the financial statements and related notes included elsewhere in this offering circular. Our financial statements are prepared in accordance with IFRS, which differs in significant respects from accounting principles generally accepted in other jurisdictions, including U.S. GAAP and Japanese GAAP. Unless otherwise indicated, we present our information on a consolidated basis. The presentation in this section contains forward-looking statements that involve risks, uncertainties and assumptions, and are subject to the qualifications set forth under "Forward-Looking Statements." Our actual results may differ materially from those anticipated in these forward-looking statements as a result of a number of factors, including but not limited to those set forth under "Risk Factors" and elsewhere in this offering circular.

Overview

We are a leading global semiconductor company that designs, develops, manufactures, markets and distributes a broad range of semiconductor products and solutions with an increasing focus on the complex needs of customers in the automotive, industrial, infrastructure and IoT sectors in a variety of applications, such as factory automation, home appliances and data centers.

Revenue, operating profit and profit attributable to owners of parent for the fiscal year ended December 31, 2020 were ¥715,673 million, ¥65,142 million and ¥45,626 million, respectively, and revenue, operating profit and profit attributable to owners of parent for the three months ended March 31, 2021 were ¥203,678 million, ¥30,191 million and ¥13,714 million, respectively.

Following our acquisition of IDT in March 2019 and the transition to a new organizational structure based on two business units afterwards, our operations are now organized into two reportable segments for financial reporting purposes: Industrial/Infrastructure/IoT Business and Automotive Business. In addition, we account for our other businesses not included in these reportable segments under Other in our consolidated financial statements.

- *Industrial/Infrastructure/IoT Business.* The Industrial/Infrastructure/IoT Business segment includes the product categories "Industrial," "Infrastructure" and "IoT", all of which are aimed to support "smart" society through various applications. We mainly supply MCUs and SoCs/MPUs in each of these categories. For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from external customers of the Industrial/Infrastructure/IoT Business segment represented 50.8% and 47.4%, respectively, of consolidated revenue for each period.

- *Automotive Business.* The Automotive Business segment includes the product categories "automotive control," which consists of semiconductor devices for controlling automobile power train, chassis, gateways and bodies, and "ADAS/Cockpit," which consists of semiconductor devices used in ADAS, sensing systems for detecting environments inside and outside the vehicle as well as automotive information devices such as camera sensing systems and IVI (in-vehicle infotainment) and instrument panels used to give various information to the driver of the vehicle. We mainly supply microcontrollers (MCUs), system-on-a-chips (SoCs), analog semiconductor devices and power semiconductor devices in each of these categories. For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from external customers of the Automotive Business segment represented 47.6% and 50.7%, respectively, of consolidated revenue for each period.

- *Other.* Our Other business consists of the commissioned development and manufacturing from our design and manufacturing subsidiaries. For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from Other represented 1.5% and 1.9%, respectively, of consolidated revenue for each period.

COVID-19 Pandemic

The worldwide COVID-19 pandemic has led governments and businesses to take unprecedented measures including restrictions on travel, temporary business closures, quarantines and shelter-in-place orders. It has significantly impacted global economic activity and caused volatility and disruption in global financial markets. As a result, demand for certain of our products has been volatile. Downturns in the worldwide economy have harmed our business in the past and the current downturn has adversely affected our business.

In our Industrial/Infrastructure/IoT Business segment, we believe certain of our products have benefited from stronger demand as people continue to work and learn from home, such as data centers and PCs.

In our Automotive Business segment, we saw a decline in our revenue for the fiscal year ended December 31, 2020 primarily due to a reduction in vehicle production as a result of the outbreak of COVID-19. However, certain quarterly results remained strong in the early part of the year compared to that of the overall automotive industry owing to a time lag in the impact from the supply chain despite a slowdown in the global automotive business. As of the three months ended March 31, 2021, we believe COVID-19 is no longer having a significant negative impact on demand, and global supply chain shortages for semiconductors have led to stronger demand globally.

As the COVID-19 pandemic continues, the timing and overall demand from customers and the availability of supply chain, logistical services and component supply may have a material net negative impact on our business and financial results. Given the continued and substantial economic uncertainty and volatility created by the COVID-19 pandemic, it is difficult to predict the nature and extent of impacts on demand for our products. See "Risk Factors—Risks Related to Our Business and Industry—The COVID-19 pandemic continues to impact our business and could materially adversely affect our financial condition and results of operations."

Factors Affecting Results of Operations

Revenue

Product

Revenue is determined by product pricing and the volume of units sold. Product pricing is affected by the type and complexity of the product sold, our competitors' pricing and the age of the product. Our products are subject to price erosion, the degree of which depends in part upon the negotiating position held by our customers with respect to those products due to the volume of their purchases, market positions and the expected lifecycle of such products, where shorter product lifecycles tend to lead to more frequent downward price renegotiations as replacement products with improved or advanced technological features more frequently come to market. This is especially true of product segments in which there are many competitors and releases of new products are more frequent. On the other hand, certain portions of the sectors in which we compete, and in the automotive sector in particular, require a relatively high level of technological capability and manufacturing know-how.

Market Conditions and Customer Demand

Revenue is affected by the market conditions in the highly cyclical semiconductor market generally and in the specific segments in which our products are sold. For example, our products used in automobiles exposes us to market conditions in the automotive sector, which is characterized by rapid technological developments and continuously evolving consumer preferences. In addition, our non-automobile products expose us to competitive conditions in the industrial, infrastructure and IoT sectors, which are characterized by diversified long-tail customers.

Our revenue is also affected by customer demand, which can fluctuate independently of broader market conditions depending on the relative success of particular customers' products that incorporate our product solutions. As we design and produce some of our products to customized specifications for our customer's products, the success of such products can lead to increased demand for our products generally. On the other hand, if demand for a customized product falls below the anticipated demand, or if changes to our customer's specifications render a customized product unsuitable for such customer's application, we have less flexibility to reallocate production capacity to other customers or to more standardized products, for which production capacity can be more flexibly reallocated to other customers.

Costs and Expenses

Cost of Sales

Due to investments in manufacturing equipment required for producing our products, an increase in revenue within existing production capacity limits during a given period will, all else being equal, generally result in a lower percentage increase in cost of sales and an improvement in operating gross margin. Conversely, a decrease in revenue will, all else being equal, generally result in a lower percentage decrease in cost of sales and a decline in operating gross margin.

Our cost of sales consists principally of:

- cost of outsourcing manufacturing activities to third-party contract manufacturers;
- depreciation and amortization related to manufacturing equipment and facilities;
- salaries and bonuses for manufacturing personnel;
- cost of raw materials and supplies, including the high-purity and high-quality materials required by our complex front-end manufacturing processes;
- loss on valuation of inventory, which in turn is impacted by downturns in the semiconductor market generally and in the particular sectors in which our customers compete, and which is exacerbated by decreases in orders for or specification changes relating to products which we designed to meet particular customers' specifications;
- repair expenses related to manufacturing equipment;
- yields, which are generally lower for newer products, which increases cost of sales per unit of product sold; and
- cost of utilities, such as electricity.

Major components of our cost of sales, including depreciation and amortization and salaries and bonuses, as well as other components such as equipment repair costs, do not correlate directly to changes in revenue. Because such components represent a significant proportion of our cost of sales, an increase in manufacturing efficiency through higher capacity utilization rates of our manufacturing facilities, which enables us to increase revenue without significantly increasing these components of cost of sales, is a key factor in improving our profitability. On the other hand, during periods of lower demand, we have experienced, and may in the future experience, significant declines in capacity utilization rates, resulting in significant adverse effects on our profitability. Our ability to achieve high capacity utilization depends largely on demand from our customers, which can be affected by market conditions and the relative success of our customers' end products incorporating our products.

We outsource production of certain of our products to wafer fabrication foundries and other sub-contractors. Increased outsourcing leads to an increase in our proportion of variable costs.

We depreciate our property, plant and equipment principally using the straight-line method over their useful lives, which are 10 to 45 years for buildings and structures, 2 to 8 years for machinery, equipment and vehicles and 2 to 10 years for tools, furniture and fixtures.

Selling, General and Administrative Expenses

Due to the fast rate of technological advancement and the rapidly changing consumer preferences inherent in the sectors in which we operate, particularly within automotives, a significant portion of our selling, general and administrative expenses consist of research and development expenses, and all of our research expenditures are expensed as incurred whereas development expenditures are tested for capitalization to be subsequently amortized or expensed as incurred. These expenses are included within selling, general and administrative expenses. Selling, general and administrative expenses consist principally of the following components:

- research and development expenses, including labor costs for research and development personnel, outsourcing costs to third parties for research and development and depreciation and amortization related to research and development;
- salaries and bonuses of employees other than manufacturing or research and development personnel;
- depreciation and amortization other than those included in manufacturing costs within cost of sales; and
- retirement benefit expenses.

March 2021 Fire at our Naka Plant

On March 19, 2021, a fire occurred at certain processes of our Naka plant, which caused the production and shipment of products at the plant to cease. The fire also caused damage to certain of our property, plant and equipment, such as machinery, as well as to our inventories. We resumed operations at our clean room at the Naka plant on April 9, 2021, achieved production capacity of approximately 10% as of April 17, 2021 and as of the date of this offering circular, we have further recovered to a higher percentage of our production capacity at the facility.

As a result of this fire, we recorded ¥2,235 million in costs for restoration and repair costs of property, plant and equipment, disposal costs and reinspection fees for inventories and fixed costs during the shutdown for the three months ended March 31, 2021. ¥2,218 million of these costs are included within cost of sales, while ¥17 million are included within other expenses in our condensed consolidated statement of profit or loss. In addition, as a result of the disposal of inventories, our inventories decreased by ¥1,077 million and we accrued ¥492 million of expenses of fire-related costs in other current liabilities.

It remains difficult to make a reasonable estimate for the total amount of damages caused to our group as a result of the fire in future periods; however, we expect that our results of operations and financial condition for the six months ended June 30, 2021 will be adversely affected by the burden of costs to restore the damaged plant facilities and equipment, a decrease in revenue and operating profit due to stoppages and reductions in utilization, a deterioration in gross margins, among other factors. See "—Outlook for the Six Months ending June 30, 2021" below.

In addition, although we expect that our insurance policies will cover a substantial portion of our losses from this fire, we remain in negotiations with our insurers and such policies may not be adequate to cover all or a portion of our losses and expenses and any such payments may take considerable time to receive. See "Risk Factors—Risks Related to Our Business and Industry—We may continue to incur costs and other lost revenue as a result of a fire that occurred in March 2021 at our Naka plant."

Acquisition Accounting in Connection with Our Acquisitions of IDT and Intersil and Impairment of Goodwill

Due mainly to our acquisitions of IDT in March 2019 and Intersil in February 2017, we carry a significant amount of goodwill. Any excess of the consideration for acquisition and the non-controlling interests in the acquiree over the net amount of identifiable assets and liabilities as of the date of acquisition is recognized as goodwill. Under IFRS, goodwill is not amortized and is measured at cost less any accumulated impairment losses. An impairment test is performed for goodwill at a certain time each fiscal year or when any signs of impairment are identified. For a description of the expected effect of the acquisition of Dialog on our financial condition and results of operations, see "Proposed Acquisition of Dialog."

As of December 31, 2020, our recorded amount of goodwill was ¥590,459 million, constituting 36.7% of our total assets as of the same date. Business combinations are accounted for using the acquisition method. Consideration transferred in a business combination is measured as the sum of the acquisition-date fair value of the assets transferred, liabilities assumed and equity instruments issued by us in exchange for control over the acquiree.

Effect of the Acquisition of IDT

On March 30, 2019, we consummated the acquisition of 100% of IDT's common stock for $6.5 billion. We began consolidating IDT's results of operations beginning on March 31, 2019. As a result, our audited consolidated financial statements for the fiscal year ended December 31, 2019 included in this offering circular consolidates IDT's assets and liabilities as of December 31, 2019. Due mainly to the consolidation of the results of operations of IDT in our results of operations for the final nine months of the fiscal year ended December 31, 2019, our results of operations for such fiscal year is not directly comparable to our results of operations for fiscal years prior to and after such year, and potential investors are advised to exercise caution when comparing our results of operations for different fiscal years.

Revision of Classification of Expenses

In addition, following the acquisition of IDT and the absorption-type merger of Former Renesas Electronics America Inc. by IDT, we began to integrate our business processes and IT systems from January 1, 2020 for the launch of “One Renesas” operations. In conjunction with the integration, we also decided to revise the classification of expenses in order to better present the financial position and results of operations of our group. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Changes in Accounting Policies.”

The change in accounting policy has been applied retrospectively to the consolidated financial statements for the fiscal year ended December 31, 2019. As a result of this change, compared with the accounting policy prior to retrospective application, cost of sales for the fiscal year ended December 31, 2019 increased by ¥8,136 million, selling, general and administrative expenses decreased by ¥7,554 million and operating profit and profit before tax decreased by ¥582 million, respectively. Reflecting the cumulative effect on equity at the beginning of the fiscal year ended December 31, 2019, the beginning balance of retained earnings in the consolidated statement of changes in equity after retroactive application increased by ¥1,192 million. This accounting change had no material impact on earnings per share.

Currency Exchange Fluctuations

The prices and costs of our products that are denominated in foreign currencies are influenced by fluctuations in foreign exchange rates. In particular, a significant portion of our product sales from customers outside Japan is denominated in U.S. dollars and Euros. Most of our manufacturing costs are denominated in Japanese yen, and to a lesser extent, U.S. dollars and Euros. Consequently, the strengthening of the Japanese yen against the U.S. dollar or the Euro would have an overall negative impact on our financial results. Assets and liabilities denominated in foreign currencies at the fiscal year-end are translated into Japanese yen for Japanese domestic companies at the applicable rates of exchange prevailing at the fiscal year-end, and differences arising from the translation are included in the consolidated statement of profit or loss as finance income or costs. Assets and liabilities of foreign subsidiaries are translated into Japanese yen at the applicable year-end rates of exchange, and all revenue and expense accounts are translated, if applicable, at the average rates of exchange prevailing during the period. Differences arising from the translation are presented as foreign currency translation adjustments or non-controlling interests in equity.

Although we engage in hedging transactions and other arrangements to minimize exchange rate risk, there can be no assurance that such arrangements will be sufficient to protect us against adverse movements in foreign exchange rates.

Seasonality

Demand for certain of our products is subject to seasonal fluctuations depending on special events and holidays in certain regions. We have historically recorded lower sales in each of the three months ended March 31 and June 30. On the other hand, we generally experience higher demand in the three months ended September 30 and December 31 due to the impact of the higher volume of product shipments to customers that manufacture consumer end products for the year-end holiday season. In addition to fluctuation in demand, seasonality affects our expenses, as we typically experience an increase in utility costs during the summer months and an incurrence of repair costs due to repair activities taking place during our factories’ shutdown periods, which tend to take place during the same summer period. In addition, payment for outsourcing contracts is typically concentrated toward the end of the December 31 year-end and June 30 midterm, due to the tendency for the term of such contracts to cover the relevant full- or half-year period.

Other Factors

In addition to the foregoing factors, our results of operations may be affected by impairment of non-financial assets and write-downs of inventory, as well as other factors. For more information on impairment of non-financial assets and write-downs of inventory, see “—Critical Accounting Policies—Impairment of Non-financial Assets” and “—Critical Accounting Policies—Inventories.”

Outlook for the Six Months ending June 30, 2021

We expect that the March 2021 fire at our Naka plant will have larger negative effects on our results of operations for the three months ending June 30, 2021 as compared to the relatively small impact that it had for the three months ended March 31, 2021. Such expected effects for the three months ending June 30, 2021 include an approximately ¥17 billion reduction in revenue due to reduced product shipments (net of the contribution of various recovery efforts and other countermeasures) and an approximately ¥21.5 billion reduction in operating profit due to inventory disposal, restoration and other repair costs, in each case compared to what we estimate our results would have been if the fire did not occur. We also expect additional capital expenditures of approximately ¥18 billion on an authorization basis for the procurement of equipment impacted by the fire for the three months ending June 30, 2021. We believe that our revenue for the three months ending June 30, 2021 will be roughly comparable to those of the three months ended March 31, 2021 in spite of these negative effects based on our positive expectations regarding the business environment. However, trends in the business environment could take a negative turn or other negative and unexpected events could occur, any of which could cause a significant decline in our results of operations for the three months ending June 30, 2021 as compared to the previous three months. The capacity reduction due to the fire was mostly resolved by May 31, 2021. In addition, any insurance payments with respect to our losses related to the fire would contribute to profit in future periods, although the timing and amount of such payments, if any, remain uncertain.

Our current expectations for our results of operations for the six months ending June 30, 2021 are forward-looking statements. Such forward-looking statements are based on management's current views with respect to future events and are subject to risks, uncertainties and assumptions. The forward-looking statements are based on specific estimates, judgments and assumptions, including prospective assumptions about the operating environment, macroeconomic conditions and the financial and operating conditions of our customers, competitors and counterparties. Due to the significant risks and uncertainties associated with these estimates, judgments and assumptions, there can be no assurance that our financial condition or results of operations will be in line with our current expectations. We expressly disclaim any obligation or undertaking to release any update or revision to any forward-looking statement contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any statement is based. See "Forward-looking Statements" and "Risk Factors" for a further discussion of risks and uncertainties on our business, financial condition and results of operations, and other factors that could cause actual results to differ materially because of those risks and uncertainties. In particular, see "Risk Factors—Risks Related to Our Business and Industry—We may continue to incur costs and other lost revenue as a result of a fire that occurred in March 2021 at our Naka plant" for a description of the risk factors related to the March 2021 fire.

Adoption of IFRS

We adopted IFRS for financial reporting purposes for the fiscal year ended December 31, 2018, using a transition date of January 1, 2017. Our audited consolidated financial statements for the fiscal year ended December 31, 2018 have been prepared in accordance with IFRS. As our consolidated financial statements were prepared under IFRS for the first time for the fiscal year ended December 31, 2018, we applied IFRS 1, "First-time Adoption of International Financial Reporting Standards." Prior to the fiscal year ended December 31, 2018, we prepared our consolidated financial statements in accordance with Japanese GAAP.

Our IFRS accounting policies are provided in Note 3 to our consolidated financial statements for the fiscal year ended December 31, 2020, included elsewhere in this offering circular.

Historical Results of Operations

The following table sets forth a summary of our consolidated results of operations for the periods indicated:

Segment amounts for the fiscal year ended December 31, 2018 have been restated to conform to the segment classification used for the fiscal year ended December 31, 2019 for comparison purposes as described under "Presentation of Financial and Other Information."

	As of and for the fiscal year ended December 31,			As of and for the three months ended March 31,	
	2018	2019(1)(2)	2020	2020	2021
				(unaudited)	
	(millions of yen)				
Selected Statement of Profit or Loss Data:					
Revenue	¥ 756,503	¥ 718,243	¥ 715,673	¥ 178,743	¥ 203,678
By segment (revenue from external customers):					
Automotive Business	389,683	371,145	341,001	93,548	103,248
Industrial/Infrastructure/IoT Business	346,569	329,705	363,609	82,555	96,605
Other(3)	20,251	17,393	11,063	2,640	3,825
Cost of sales	(424,066)	(423,451)	(379,984)	(96,443)	(105,923)
Gross profit	332,437	294,792	335,689	82,300	97,755
Selling, general and administrative expenses	(251,021)	(273,454)	(266,268)	(68,326)	(65,830)
Other income	8,953	2,302	4,036	633	3,155
Other expenses	(22,173)	(17,377)	(8,315)	(1,294)	(4,889)
Operating profit	68,196	6,263	65,142	13,313	30,191
Finance income	1,609	2,186	7,623	3,063	1,618
Finance costs	(2,131)	(8,774)	(7,549)	(2,198)	(14,185)
Share of profit of investments accounted for using the equity method	49	—	—	—	—
Profit (loss) before tax	67,723	(325)	65,216	14,178	17,624
Income tax expense	(16,664)	(5,903)	(19,490)	(2,820)	(3,818)
Profit (loss)	¥ 51,059	¥ (6,228)	¥ 45,726	¥ 11,358	¥ 13,806

Notes:

(1) Following the acquisition of IDT and the absorption-type merger of Former Renesas Electronics America Inc. by IDT, we revised the classification of expenses in order to better present our financial position and results of operations from the three months ended March 31, 2020. This change in accounting policy has been applied retrospectively to the consolidated financial statements for the fiscal year ended December 31, 2019. As a result of this change, compared with the accounting policy prior to retrospective application, cost of sales for the fiscal year ended December 31, 2019 increased by ¥8,136 million, selling, general and administrative expenses decreased by ¥7,554 million and operating profit and profit before tax decreased by ¥582 million, respectively.

(2) As a result of our transition to IFRS16 (defined below), we recognized ¥12,682 million of right-of-use assets and ¥13,102 million of lease liabilities, and we recognized the difference of ¥420 million as accrued leases payments at the beginning of the fiscal year ended December 31, 2019. In addition, under IFRS 16, we recognize depreciation costs arising from right-of-use assets in selling, general and administrative expenses, and also recognize interest costs arising from lease liabilities in finance costs.

(3) "Other" is not a reportable segment and includes commissioned development and manufacturing from our group's design and manufacturing subsidiaries.

Revenue

Comparison of the Three Months Ended March 31, 2021 and the Three Months Ended March 31, 2020

Revenue increased by ¥24,935 million, or 14.0%, to ¥203,678 million for the three months ended March 31, 2021 from ¥178,743 million for the three months ended March 31, 2020.

Automotive Business. Revenue of the Automotive Business segment was ¥103,248 million in the three months ended March 31, 2021, an increase of ¥9,700 million, or 10.4%, from ¥93,548 million in the three months ended March 31, 2020. The increase was due mainly to increases in sales in both our automotive control and ADAS/Cockpit subsegments as a result of the recovery of the automotive industry from the reduced vehicle production in the prior period.

Industrial/Infrastructure/IoT Business. Revenue of the Industrial/Infrastructure/IoT Business segment was ¥96,605 million in the three months ended March 31, 2021, an increase of ¥14,050 million, or 17.0%, from ¥82,555 million in the three months ended March 31, 2020. The increase was due mainly to revenue increases as a result of steady demand in the "Industrial" subsegment, mainly in factory automation, the "Infrastructure" subsegment, mainly including data centers and mobile phone base stations, and the "IoT" subsegment, mainly in office automation devices for PCs which have seen increased demand due to remote working and remote learning.

Comparison of the Fiscal Year Ended December 31, 2020 and the Fiscal Year Ended December 31, 2019

Revenue decreased by ¥2,570 million, or 0.4%, to ¥715,673 million for the fiscal year ended December 31, 2020 from ¥718,243 million for the fiscal year ended December 31, 2019.

Automotive Business. Revenue of the Automotive Business segment was ¥341,001 million in the fiscal year ended December 31, 2020, a decrease of ¥30,144 million, or 8.1%, from ¥371,145 million in the fiscal year ended December 31, 2019. The decrease was due mainly to a reduction in vehicle production as a result of the COVID-19 pandemic, resulting in a decrease in revenue.

Industrial/Infrastructure/IoT Business. Revenue of the Industrial/Infrastructure/IoT Business segment was ¥363,609 million in the fiscal year ended December 31, 2020, an increase of ¥33,904 million, or 10.3%, from ¥329,705 million in the fiscal year ended December 31, 2019. The increase was due mainly to an increase in revenue that reflects the steady performance of our Infrastructure business, mainly in data centers, and our IoT business, primarily in office automation devices for PCs due to the increase in remote working and remote learning, in addition to the recording of 12 months' worth of IDT's revenue as Renesas' consolidated revenue in comparison to the recording of 9 months' worth of IDT's revenue at the fiscal year ended December 31, 2019.

Comparison of the Fiscal Year Ended December 31, 2019 and the Fiscal Year Ended December 31, 2018

Revenue decreased by ¥38,260 million, or 5.1%, to ¥718,243 million for the fiscal year ended December 31, 2019 from ¥756,503 million for the fiscal year ended December 31, 2018.

Automotive Business. Revenue of the Automotive Business segment was ¥371,145 million in the fiscal year ended December 31, 2019, a decrease of ¥18,538 million, or 4.8%, from ¥389,683 million in the fiscal year ended December 31, 2018. The decrease was due mainly to weakening demand for focused applications in our Automotive Business segment as a result of increasing uncertainties in the global economy.

Industrial/Infrastructure/IoT Business. Revenue of the Industrial/Infrastructure/IoT Business segment was ¥329,705 million in the fiscal year ended December 31, 2019, a decrease of ¥16,864 million, or 4.9%, from ¥346,569 million in the fiscal year ended December 31, 2018. The decrease was due mainly to weakening demand for focused applications in our Industrial/Infrastructure/IoT Business segment as a result of increasing uncertainties in the global economy.

Revenue by Geographic Region

The following table sets forth our revenue from external customers on a geographic basis for the periods indicated:

	Fiscal year ended December 31,			**Three months ended March 31,**	
	2018	**2019**	**2020**	**2020**	**2021**
				(unaudited)	
	(millions of yen)				
Revenue:(1)					
Japan	¥300,530	¥261,663	¥241,186	¥ 63,638	¥ 71,071
China	153,289	150,486	168,548	38,646	40,245
Asia (Excluding Japan and China)	106,984	117,959	126,614	27,676	39,189
Europe	125,062	118,990	111,908	30,014	33,758
North America	67,239	66,228	65,048	18,043	18,770
Other	3,399	2,917	2,369	726	645
Total	¥756,503	¥718,243	¥715,673	¥178,743	¥203,678

Note:
(1) Revenues are categorized into the country or region based on the location of the customers.

Gross Profit

Comparison of the Three Months Ended March 31, 2021 and the Three Months Ended March 31, 2020

Gross profit increased by ¥15,455 million, or 18.8%, to ¥97,755 million for the three months ended March 31, 2021 from ¥82,300 million for the three months ended March 31, 2020. The increase was due mainly to increases in revenue for both our Automotive Business and Industrial/Infrastructure/IoT Business segments as well as increases in the sales of high margin products and improvements in our factory utilization rate.

Comparison of the Fiscal Year Ended December 31, 2020 and the Fiscal Year Ended December 31, 2019

Gross profit increased by ¥40,897 million, or 13.9%, to ¥335,689 million for the fiscal year ended December 31, 2020 from ¥294,792 million for the fiscal year ended December 31, 2019. The increase was due mainly to the effects of sales increases in the profitable Industrial/Infrastructure/IoT Business segment as well as reduction of fixed costs.

Comparison of the Fiscal Year Ended December 31, 2019 and the Fiscal Year Ended December 31, 2018

Gross profit decreased by ¥37,645 million, or 11.3%, to ¥294,792 million for the fiscal year ended December 31, 2019 from ¥332,437 million for the fiscal year ended December 31, 2018. The decrease was due mainly to decreases in revenue in both our Automotive Business and Industrial/Infrastructure/IoT Business segments.

Operating Profit

The following table sets forth our operating profit by reportable segment, before other adjustments, for the fiscal years ended December 31, 2018, 2019 and 2020 and for the three months ended March 31, 2020 and 2021. Segment amounts for the fiscal year ended December 31, 2018 have been restated to conform to the segment classification used for the fiscal year ended December 31, 2019 for comparison purposes as described under "Presentation of Financial and Other Information."

	Fiscal year ended December 31,			Three months ended March 31,	
	2018	**2019**	**2020**	**2020**	**2021**
				(unaudited)	
	(millions of yen)				
Segment profit or loss:[1]					
Automotive Business	¥ 16,165	¥ 30,984	¥ 48,356	¥ 14,395	¥22,791
Industrial/Infrastructure/IoT Business	80,547	59,063	89,702	18,974	24,888
Other	1,834	1,037	1,177	302	414
Adjustments[2]	5,498	1,398	(1,697)	—	4,514
Total	104,044	92,482	137,538	33,671	52,607
Adjustments[3]	(35,848)[4]	(86,219)[5]	(72,396)[6]	(20,358)[7]	(22,416)[8]
Total consolidated operating profit	¥ 68,196	¥ 6,263	¥ 65,142	¥ 13,313	¥30,191

Notes:
(1) Segment profit or loss is calculated by deducting cost of sales, general, selling and administrative expenses and other expenses from segment revenue and adding other income. We assess the performance after eliminating intragroup transactions, and therefore, adjustments do not include intragroup transactions.
(2) These adjustments reflect our reportable segment's allocation of the non-recurring items and other specified adjustments deducted or adjusted following a certain set of rules.
(3) These adjustments show the remaining non-recurring items and other specified adjustments deducted or adjusted following a certain set of rules.
(4) For the fiscal year ended December 31, 2018, these adjustments primarily consisted of amortization of purchased intangible assets and depreciation of property, plant and equipment of ¥17.1 billion, stock-based compensation of ¥5.5 billion and other reconciliation items in non-recurring expenses and adjustments of ¥13.3 billion.
(5) For the fiscal year ended December 31, 2019, these adjustments primarily consisted of amortization of purchased intangible assets and depreciation of property, plant and equipment of ¥47.6 billion, stock-based compensation of

¥12.0 billion, market value of inventories of ¥11.3 billion and other reconciliation items in non-recurring expenses and adjustments of ¥15.2 billion.

(6) For the fiscal year ended December 31, 2020, these adjustments primarily consisted of amortization of purchased intangible assets and depreciation of property, plant and equipment of ¥55.5 billion, stock-based compensation of ¥14.6 billion and other reconciliation items in non-recurring expenses and adjustments of ¥2.4 billion.

(7) For the three months ended March 31, 2020, these adjustments primarily consisted of amortization of purchased intangible assets and depreciation of property, plant and equipment of ¥14.9 billion, stock-based compensation of ¥3.9 billion and other reconciliation items in non-recurring expenses and adjustments of ¥1.6 billion.

(8) For the three months ended March 31, 2021, these adjustments primarily consisted of amortization of purchased intangible assets and depreciation of property, plant and equipment of ¥13.2 billion, stock-based compensation of ¥3.0 billion and other reconciliation items in non-recurring expenses and adjustments of ¥6.2 billion.

Comparison of the Three Months Ended March 31, 2021 and the Three Months Ended March 31, 2020

Operating profit increased by ¥16,878 million, or 126.8%, to ¥30,191 million for the three months ended March 31, 2021 from ¥13,313 million for the three months ended March 31, 2020.

Automotive Business. Segment profit of the Automotive Business segment (before adjustments) was ¥22,791 million in the three months ended March 31, 2021, an increase of ¥8,396 million, or 58.3%, from ¥14,395 million in the three months ended March 31, 2020. The increase was due mainly to an increase in gross profit owing to improvements in our product mix as well as a decrease in selling, general and administrative expenses in addition to an increase in revenue.

Industrial/Infrastructure/IoT Business. Segment profit of the Industrial/Infrastructure/IoT Business segment (before adjustments) was ¥24,888 million in the three months ended March 31, 2021, an increase of ¥5,914 million, or 31.2%, from ¥18,974 million in the three months ended March 31, 2020. The increase was due mainly to increased sales within this segment as well as margin improvements.

Comparison of the Fiscal Year Ended December 31, 2020 and the Fiscal Year Ended December 31, 2019

Operating profit increased by ¥58,879 million to ¥65,142 million for the fiscal year ended December 31, 2020 from ¥6,263 million for the fiscal year ended December 31, 2019.

Automotive Business. Operating profit of the Automotive Business segment (before adjustments) was ¥48,356 million in the fiscal year ended December 31, 2020, an increase of ¥17,372 million, or 56.1%, from ¥30,984 million in the fiscal year ended December 31, 2019. The increase was due mainly to an increase in gross margin owing to improvements to our product mix as well as a decrease in selling, general and administrative expenses, partially offset by a decrease in revenue.

Industrial/Infrastructure/IoT Business. Operating profit of the Industrial/Infrastructure/IoT Business segment (before adjustments) was ¥89,702 million in the fiscal year ended December 31, 2020, an increase of ¥30,639 million, or 51.9%, from ¥59,063 million in the fiscal year ended December 31, 2019. The increase was due mainly to the effect of a sales increase as well as an increase in our gross margin.

Comparison of the Fiscal Year Ended December 31, 2019 and the Fiscal Year Ended December 31, 2018

Operating profit decreased by ¥61,933 million, or 90.8%, to ¥6,263 million for the fiscal year ended December 31, 2019 from ¥68,196 million for the fiscal year ended December 31, 2018. The decrease was due mainly to decreases in revenue in both the Automotive Business and Industrial/Infrastructure/IoT Business segments.

Automotive Business. Operating profit of the Automotive Business segment (before adjustments) was ¥30,984 million in the fiscal year ended December 31, 2019, an increase of ¥14,819 million, or 91.7%, from ¥16,165 million in the fiscal year ended December 31, 2018. The increase was due mainly to controlling selling, general and administrative expenses for research and development despite a decrease in segment revenue.

Industrial/Infrastructure/IoT Business. Operating profit of the Industrial/Infrastructure/IoT Business segment (before adjustments) was ¥59,063 million in the fiscal year ended December 31, 2019, a decrease of ¥21,484 million, or 26.7%, from ¥80,547 million in the fiscal year ended December 31, 2018. The decrease was due mainly to a decrease in segment revenue.

Profit (Loss) before tax

Comparison of the Three Months Ended March 31, 2021 and the Three Months Ended March 31, 2020

Profit or loss before tax increased by ¥3,446 million, or 24.3%, to ¥ 17,624 million for the three months ended March 31, 2021 from ¥14,178 million for the three months ended March 31, 2020. The increase was due mainly to an increase in operating profit, partially offset by an increase in finance costs including foreign exchange loss.

Comparison of the Fiscal Year Ended December 31, 2020 and the Fiscal Year Ended December 31, 2019

We recorded a profit before tax of ¥65,216 million for the fiscal year ended December 31, 2020, an increase of ¥65,541 million compared to a loss before tax of ¥325 million for the fiscal year ended December 31, 2019. The increase was due mainly to an increase in finance income including foreign exchange gain, in addition to an increase in operating profit.

Comparison of the Fiscal Year Ended December 31, 2019 and the Fiscal Year Ended December 31, 2018

We recorded a loss before tax of ¥325 million for the fiscal year ended December 31, 2019, a decrease of ¥68,048 million compared to a profit before tax of ¥67,723 million for the fiscal year ended December 31, 2018. The decrease was due mainly to an increase in finance income including foreign exchange gain, in addition to a decrease in operating profit.

Profit (Loss)

Comparison of the Three Months Ended March 31, 2021 and the Three Months Ended March 31, 2020

Profit increased by ¥2,448 million, or 21.6%, to ¥13,806 million for the three months ended March 31, 2021 from ¥11,358 million for the three months ended March 31, 2020. The increase was due mainly to an increase in profit before tax.

Comparison of the Fiscal Year Ended December 31, 2020 and the Fiscal Year Ended December 31, 2019

We recorded a profit of ¥45,726 million for the fiscal year ended December 31, 2020, an increase of ¥51,954 million compared to a loss of ¥6,228 million for the fiscal year ended December 31, 2019. The increase was due mainly to an increase in profit before tax.

Comparison of the Fiscal Year Ended December 31, 2019 and the Fiscal Year Ended December 31, 2018

We recorded a loss of ¥6,228 million for the fiscal year ended December 31, 2019, a decrease of ¥57,287 million compared to a profit of ¥51,059 million for the fiscal year ended December 31, 2018. The decrease was due mainly to a decrease in profit (loss) before tax.

Quarterly Financial Results and Other Information

The following table sets forth a summary of our consolidated results of operations for the periods indicated:

	Three months ended								
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019(1)	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020(1)	March 31, 2021
	(millions of yen) (unaudited)								
Statements of Profit or Loss Data									
Revenue	¥150,259	¥192,625	¥ 183,357	¥ 192,002	¥178,743	¥166,672	¥ 178,678	¥ 191,580	¥203,678
Automotive Business	82,712	94,525	93,135	100,773	93,548	72,626	79,551	95,276	103,248
Industrial/Infrastructure/ IoT Business	63,337	93,523	85,860	86,985	82,555	91,567	96,671	92,816	96,605
Other	4,210	4,577	4,362	4,244	2,640	2,479	2,456	3,488	3,825
Operating profit (loss)	(1,370)	(10,856)	8,052	10,437	13,313	17,256	17,249	17,324	30,191
Profit (loss)	(1,921)	(9,102)	4,058	737	11,358	11,902	15,228	7,238	13,806

	Three months ended								
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019(1)	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020(1)	March 31, 2021
	(percentage of revenue) (unaudited)								
Statements of Profit or Loss Data									
Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Automotive Business	55.0%	49.1%	50.8%	52.5%	52.3%	43.6%	44.5%	49.7%	50.7%
Industrial/Infrastructure/ IoT Business	42.2%	48.6%	46.8%	45.3%	46.2%	54.9%	54.1%	48.4%	47.4%
Other	2.8%	2.4%	2.4%	2.2%	1.5%	1.5%	1.4%	1.8%	1.9%
Operating profit (loss)	(0.9)%	(5.6)%	4.4%	5.4%	7.4%	10.4%	9.7%	9.0%	14.8%
Profit (loss)	(1.3)%	(4.7)%	2.2%	0.4%	6.4%	7.1%	8.5%	3.8%	6.8%

Note:

(1) The results for the three months ended December 31, 2019 and 2020 were prepared by subtracting the results for the nine months ended September 30, 2019 and 2020, respectively, from the results for the fiscal years ended December 31, 2019 and 2020, respectively.

Liquidity and Capital Resources

Our basic financial policy is to secure adequate liquidity and capital resources for our operations and to maintain a strong financial position. Our capital and liquidity needs principally relate to investments in additional production capacity, research and development, investments in equipment for new technologies, production line maintenance expenses and general working capital requirements. Our capital and liquidity needs also relate to expenditures for historical acquisitions, including our acquisition of IDT on March 30, 2019 and our planned acquisition of Dialog. We intend to consider a variety of methods in order to finance our future capital expenditures, including cash flow from operations, debt and equity financing and sale and lease-back and other leasing transactions.

In order to refinance our existing borrowings, finance a portion of the acquisition of IDT and to provide working capital in the form of medium- and long-term funding, we entered into a syndicated loan agreement on January 15, 2019 with MUFG Bank, Ltd., Mizuho Bank, Ltd., Sumitomo Mitsui Trust Bank, Limited and five other financial institutions, for two term loans with a total availability of ¥698 billion, a term loan of ¥149 billion and a commitment line loan of ¥50 billion, for a total amount of ¥897 billion. The term loans for ¥698 billion have a repayment date of March 28, 2024 while the term loan for ¥149 billion has a repayment date of June 28, 2024.

In addition, on July 13, 2020, we entered into an additional commitment line agreement with MUFG Bank, Ltd., Mizuho Bank, Ltd., Sumitomo Mitsui Trust Bank, Limited and Resona Bank, Ltd. for a maximum loan amount of ¥75 billion. However, we terminated this agreement on March 2, 2021.

As of March 31, 2021, the total amount of our interest-bearing liabilities, including bonds and borrowings and lease liabilities was ¥671.1 billion. We believe that our cash and deposits and our cash flows from operations will be sufficient to meet our current cash requirements, including working capital, capital expenditures and debt service, for the foreseeable future.

Bridge Facilities Agreement

In order to finance the Dialog Acquisition, we entered into a syndicated bridge facilities agreement on February 8, 2021 with MUFG Bank, Ltd. and Mizuho Bank, Ltd. (the "Bridge Facilities Agreement"). Under the Bridge Facilities Agreement, MUFG Bank, Ltd. and Mizuho Bank, Ltd. have agreed to make available to us a bridge term loan facility in an aggregate amount equal to ¥735.4 billion (the "Bridge Facilities").

The proceeds of the loans under the Bridge Facilities Agreement are to be applied by us, among other things, towards financing the cash consideration payable pursuant to the Dialog Acquisition. The Bridge Facilities are available to be drawn by us, subject to satisfaction of the conditions precedent set out in the Bridge Facilities Agreement, from the date of the Bridge Facilities Agreement until the earliest to occur of (i) the date on which the Scheme lapses or is withdrawn in writing, subject to certain other terms and consents, (ii) the date on which each of the commitments under the Bridge Facilities Agreement have been utilized or cancelled in full by us; or (iii) 14 days after the long stop date of January 21, 2022.

The Bridge Facilities are divided into four tranches (Facility A, Facility B, Facility C and Facility D). Facility A, Facility B and Facility C are the main acquisition facilities (with Facility C cash collateralized, to reduce overall interest rate costs) and Facility D was intended as a buffer facility to mitigate potential JPY/EUR foreign exchange rate movements between the date of the Bridge Facilities Agreement and the date of payment of the cash consideration for the Dialog Acquisition (given that the Bridge Facilities are denominated in JPY and the cash consideration for the Dialog Acquisition is payable in EUR).

To provide additional and/or alternative mitigation to any JPY/EUR foreign exchange rate movements, we have entered into JPY/EUR foreign exchange rate hedging products on a certain funds basis. As a result of these hedging transactions, we cancelled a portion of Facility D totaling ¥70.0 billion as of April 30, 2021.

The Bridge Facilities Agreement contains financial covenants as follows:

- (i) Renesas' consolidated net worth for any financial year shall be greater than or equal to 75% of its consolidated net worth on the previous financial year's financial year end; and

- (ii) Renesas shall not have negative consolidated operating income or negative consolidated net income for any two consecutive financial years.

Consolidated net worth is defined as net assets (*junshisan no bu no goukeigaku*), consolidated operating income is defined as operating profit (*eigyo rieki*) and consolidated net income is defined as net income (*toki jun rieki*).

The Bridge Facilities Agreement contains customary representations and warranties, affirmative and negative covenants (including covenants in respect of security, disposals, merger, change of business, anti-social activities and conduct of any contractual offer and/or scheme of arrangement), indemnities, mandatory prepayments and events of default, each with appropriate carve-outs and materiality thresholds.

The rate of interest payable on each loan drawn under the Bridge Facilities Agreement is the aggregate of TIBOR plus:

- (i) for any loan under Facility A, Facility B or Facility D, 0.75% per annum, or (for any interest period other than the first interest period) if Renesas' long term credit rating publicized by S&P Global Ratings Japan Inc. or Fitch Ratings Japan Ltd. (whichever is higher) is BB+ or lower 1.00% per annum; and

- (ii) for any loan under Facility C, 0.03% per annum.

As of the date of this offering circular, our long-term credit ratings are BBB- by S&P Global Ratings Japan Inc. and BBB- by Fitch Ratings Japan Ltd. We have also been placed on credit watch negative from S&P Global Ratings Japan Inc. and rating watch negative from Fitch Ratings Japan Ltd. after our announcement of the Dialog Acquisition. The ratings are not a recommendation to buy, sell or hold securities. The ratings are subject to revision or withdrawal at any time by the assigning rating agency. Each of the financial strength ratings should be evaluated independently.

Cash Flow

The following table shows information about our cash flows during the periods indicated:

	Fiscal year ended December 31,			Three months ended March 31,	
	2018	2019	2020	2020	2021
				(unaudited)	
	(millions of yen)				
Net cash provided by operating activities	¥172,308	¥ 201,960	¥ 223,889	¥ 28,729	¥ 47,282
Net cash used in investing activities	(80,872)	(742,162)	(40,163)	(10,074)	(6,099)
Net cash provided by (used in) financing activities	(39,251)	500,466	(104,470)	(26,560)	(25,686)
Effect of exchange rate changes on cash and cash equivalents	(2,910)	(2,616)	(5,938)	(1,627)	8,344
Net increase (decrease) in cash and cash equivalents	49,275	(42,352)	73,318	(9,532)	23,841
Cash and cash equivalents at the beginning of the period	139,545	188,820	146,468	146,468	219,786
Cash and cash equivalents at the end of the period	188,820	146,468	219,786	136,936	243,627

Net Cash Provided by Operating Activities

Comparison of the Three Months Ended March 31, 2021 and the Three Months Ended March 31, 2020

Net cash provided by operating activities increased by ¥18,553 million to ¥47,282 million for the three months ended March 31, 2021 from ¥28,729 million for the three months ended March 31, 2020. The increase was due mainly to higher profit before tax, a foreign exchange loss of ¥10,397 million compared to a ¥1,496 million gain in the prior period, an increase in trade and other payables of ¥7,754 million compared to a decrease of ¥7,785 million in the prior period and a decrease in inventories of ¥5,024 million compared to an increase of ¥6,698 million in the prior period, partially offset by an increase in trade and other receivables of ¥9,682 million compared to a decrease of ¥3,158 million in the prior period.

Comparison of the Fiscal Year Ended December 31, 2020 and the Fiscal Year Ended December 31, 2019

Net cash provided by operating activities increased by ¥21,929 million to ¥223,889 million for the fiscal year ended December 31, 2020 from ¥201,960 million for the fiscal year ended December 31, 2019. The increase was due mainly to our recording a profit before tax of ¥65,216 million for the fiscal year ended December 31, 2020 as compared to a loss before tax of ¥325 million for the prior fiscal year.

Comparison of the Fiscal Year Ended December 31, 2019 and the Fiscal Year Ended December 31, 2018

Net cash provided by operating activities increased by ¥29,652 million to ¥201,960 million for the fiscal year ended December 31, 2019 from ¥172,308 million for the fiscal year ended December 31, 2018. The increase was due mainly to an increase in depreciation and amortization of ¥148,026 million during the fiscal year ended December 31, 2019 as compared to ¥112,743 million in the prior fiscal year, changes in inventories of ¥44,549 million during the fiscal year ended December 31, 2019 as compared to ¥6,956 million during the prior fiscal year and a decrease in trade and other payables of ¥36 million compared to a decrease of ¥27,999 million in the prior fiscal year, partially offset by our loss before tax of ¥325 million that we recorded for the fiscal year ended December 31, 2019 as compared to a profit before tax of ¥67,723 million during the prior fiscal year.

Net Cash Used in Investing Activities

Comparison of the Three Months Ended March 31, 2021 and the Three Months Ended March 31, 2020

Net cash used in investing activities decreased by ¥3,975 million to ¥6,099 million for the three months ended March 31, 2021 from ¥10,074 million for the three months ended March 31, 2020. The decrease was due mainly to an increase in the proceeds from sales of property, plant and equipment and a reduction in the purchase of intangible assets to ¥2,323 million from ¥4,189 million in the prior period.

Comparison of the Fiscal Year Ended December 31, 2020 and the Fiscal Year Ended December 31, 2019

Net cash used in investing activities decreased by ¥701,999 million to ¥40,163 million for the fiscal year ended December 31, 2020 from ¥742,162 million for the fiscal year ended December 31, 2019. The decrease was due mainly to ¥685,831 million in cash that we paid in connection with the acquisition of IDT during the fiscal year ended December 31, 2019.

Comparison of the Fiscal Year Ended December 31, 2019 and the Fiscal Year Ended December 31, 2018

Net cash used in investing activities increased by ¥661,290 million to ¥742,162 million for the fiscal year ended December 31, 2019 from ¥80,872 million for the fiscal year ended December 31, 2018. The increase was due mainly to ¥685,831 million in cash that we paid in connection with the acquisition of IDT during the fiscal year ended December 31, 2019.

Net Cash Provided by (Used in) Financing Activities

Comparison of the Three Months Ended March 31, 2021 and the Three Months Ended March 31, 2020

Net cash used in financing activities decreased by ¥874 million to ¥25,686 million for the three months ended March 31, 2021 from ¥26,560 million for the three months ended March 31, 2020. The decrease was due mainly to a reduction in the repayments of our lease liabilities and interest paid.

Comparison of the Fiscal Year Ended December 31, 2020 and the Fiscal Year Ended December 31, 2019

Net cash provided by financing activities decreased by ¥604,936 million to net cash used in financing activities of ¥104,470 million for the fiscal year ended December 31, 2020 compared to net cash provided by financing activities of ¥500,466 million for the fiscal year ended December 31, 2019. The increase was due mainly to proceeds from long-term borrowings of ¥847,000 million during the fiscal year ended December 31, 2019, partially offset by repayments of long-term borrowings of ¥217,645 million in connection with the acquisition of IDT during the fiscal year ended December 31, 2019 as compared to ¥93,295 million during the fiscal year ended December 31, 2020.

Comparison of the Fiscal Year Ended December 31, 2019 and the Fiscal Year Ended December 31, 2018

Net cash provided by financing activities increased by ¥539,717 million to ¥500,466 million for the fiscal year ended December 31, 2019 compared to net cash used in financing activities of ¥39,251 million for the fiscal year ended December 31, 2018. The increase was due mainly to proceeds from long-term borrowings of ¥847,000 million during the fiscal year ended December 31, 2019, partially offset by an increase in repayments of long-term borrowings in connection with the acquisition of IDT during the fiscal year ended December 31, 2019 as compared to the prior fiscal year.

Research and Development Expenses

Our research and development expenses for the fiscal years ended December 31, 2019 and 2020 were ¥134.8 billion and ¥135.1 billion, respectively. Our research and development expenses include capitalized research and development expenses recorded as intangible assets. See "Business—Research and Development."

Capital Expenditures

Our capital expenditures for the fiscal years ended December 31, 2019 and 2020 were ¥10.8 billion and ¥22.2 billion, respectively. Capital expenditures refers to the amount of capital for property, plant and equipment (manufacturing equipment) and intangible assets based on the amount of investment decisions made during the applicable fiscal year. From the quarter ended March 31, 2020, capital expenditures include IDT's investments as well as investments including fixed costs of masks and tools.

Maturity Schedule for Trade and Other Payables, Bonds and Borrowings and Lease Liabilities

The following table shows our repayment schedules for both principal and interest payments after the fiscal year-end for trade and other payables, bonds and borrowings and lease liabilities as of December 31, 2020 for the periods indicated:

	Maturity Amount in the Fiscal Year Ending December 31,						
	Total	**2021**	**2022**	**2023**	**2024**	**2025**	**2026 and later**
	(millions of yen)						
Trade and other payables	¥139,412	¥114,235	¥ 11,695	¥ 10,979	¥ 2,503	¥ —	¥ —
Bonds and borrowings	698,762	98,560	97,777	96,994	405,431	—	—
Lease liabilities	14,487	3,927	3,388	2,278	1,738	1,365	1,791
Other	300	—	300	—	—	—	—
Total	¥852,961	¥216,722	¥113,160	¥110,251	¥409,672	¥1,365	¥1,791

Contingent Liabilities

Our contingent liabilities consist of debt guarantees and contingent liabilities arising from litigation. Our debt guarantees primarily consist of our guarantees of employees' housing loans. As of December 31, 2019 and 2020, our debt guarantees totaled ¥45 million and ¥36 million, respectively. For a discussion of pending legal proceedings, see "Business—Legal Proceedings."

Off-Balance Sheet Arrangements

We engage in liquidation of our accounts receivable on a regular basis. As of December 31, 2020, the balance of such transactions was ¥13.8 billion.

Critical Accounting Policies

The consolidated financial statements of Renesas have been prepared in accordance with IFRS. The preparation of our consolidated financial statements requires management to make estimates and assumptions that affect the reported amount of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reported period. Management evaluates its estimates and assumptions on an ongoing basis. Management bases its estimates and assumptions on historical experience and on various other factors that it believes to be reasonable at the time the estimates and assumptions are made. Actual results may differ from these estimates and assumptions.

We believe the following critical accounting policies are affected by management's estimates and assumptions, changes to which could have a significant impact on our consolidated financial statements.

Impairment of Non-financial Assets

We perform an impairment test for non-financial assets (excluding inventories, deferred tax assets and assets pertaining to retirement benefits) if there is any indication that the recoverable amount will be less than the carrying amount. However, for goodwill or intangible assets with indefinite useful lives or that are not yet available for use, an impairment test is performed at a certain time each fiscal year or when any signs of impairment exist.

The impairment test is performed by comparing the carrying amount and the recoverable amount of the assets, and if the recoverable amount falls below the carrying amount, an impairment loss is recorded. The recoverable amount is mainly calculated using the discounted cash flow model, and when it is calculated, certain assumptions, including the useful life of the asset, future cash flows, discount rate, and long-term growth rate, etc., are made. These assumptions are determined based on the best estimates and judgments of management, but could be influenced by the results of fluctuations in uncertain future economic conditions. If a revision becomes necessary, it could have a significant impact on the amounts that will be recognized in the consolidated financial statements of subsequent periods.

We assess impairment at the grouping level of a smallest identifiable group that generates cash inflows that are largely independent, based on the categories used for business management. We assess impairment by each individual asset for significant assets to be disposed of and idle assets. We also perform impairment tests for cash-generating units to which goodwill and intangible assets not yet available for use are allocated at a certain time each fiscal year and whenever there is any indication of impairment.

We include our impairment losses within "other expenses" within our consolidated statement of profit or loss. For more information on our impairment losses, see Note 15 to our consolidated financial statements included in this offering circular.

Post-employment Benefits

We have a variety of post-employment benefit plans, including a defined benefit plan. The present value of the defined benefit obligation of each plan and related service costs, etc. are calculated based on actuarial assumptions. For the actuarial assumptions, estimates and judgments on a range of variables such as the discount rate are required.

The actuarial assumptions are determined based on the best estimates and judgments of management but could be affected by the results of fluctuations in uncertain future economic conditions. If a revision becomes necessary, it could have a significant impact on the amounts that will be recognized in the consolidated financial statements of subsequent periods.

Provisions

We post a range of provisions in our consolidated statements of financial position, including a provision for product warranties and a provision for business structure improvement, etc. These provisions are recorded based on the best estimate of expenditures required for the settlement of the obligations, taking into account risks and uncertainties related to the obligations on the closing date of the financial period.

The amount of expenditures required for the settlement of the obligations is calculated by comprehensively taking into account results that could arise in the future, but such amounts could be affected by the occurrence of unforeseeable events and changes in the situation. If the actual amount of expenditures differs from the estimate, it could have a significant impact on amounts recognized in the consolidated financial statements of subsequent periods.

Recoverability of Deferred Tax Assets

When deferred tax assets are recognized, the time and amount of taxable profits that could be earned in the future based on a business plan are estimated and calculated to determine whether taxable profits will arise. Because the timing and amount of taxable profits are affected by our future business performance, if the actual timing and amount differ from the estimate, it could have a significant impact on the amounts recognized in the consolidated financial statements of subsequent periods.

Inventories

Inventories are measured at cost, but if the net realizable value at the end of the fiscal period falls below the acquisition cost, inventories are measured at the net realizable value, and the difference from the acquisition cost is recognized in the cost of sales, in principle. For slow moving inventory that is outside of the operating cycle process, the net realizable value, etc. is calculated reflecting the future demand and market trends. If the net realizable value declines significantly due to greater-than-expected deterioration of the market environment, a loss could arise.

Measurement Method of the Fair Value of Financial Instruments

When we evaluate the fair value of certain financial instruments, we use valuation techniques that use inputs that are not observable in the market. These unobservable inputs could be affected by the result of fluctuations in uncertain future economic conditions, and if a revision becomes necessary, it could have a significant impact on the consolidated financial statements in subsequent periods.

Income Taxes

We recognize tax assets and liabilities at a reasonably estimated amount based on the interpretation of tax laws where there is an uncertain tax position. Our deferred taxes include liabilities related to an uncertain tax position. Tax effects of assets and liabilities explained above are calculated using the expected value method. Estimates are based on the best estimate at the moment. However, differences from the estimates could have a significant impact on the consolidated financial statements in subsequent periods depending on the actual results.

Revenue Recognition

We recognize revenue based on the following five-step model:

- Step 1: Identify the contract with a customer.

- Step 2: Identify the performance obligations in the contract.

- Step 3: Determine the transaction price.

- Step 4: Allocate the transaction price to the performance obligations in the contract.

- Step 5: Recognize revenue when the entity satisfies a performance obligation.

We engage in research, design, development, manufacturing, sales and services related to various kinds of semiconductors as a manufacturer specializing in semiconductors. Revenue is recognized mainly when the goods are delivered as the ownership of these goods has been transferred to the customer and the performance obligations are satisfied at the time of delivery.

In addition, revenue is measured at the fair value of the consideration received after deducting discounts, rebates and returns. With regard to sales contracts including variable consideration such as rebate and discounts, the transaction price is estimated and determined using the most-likely-amount method based largely on historical data, considering variable prices within a range that will not result in significant deviation between estimate and historical data. Consideration under sales contracts is recovered mainly within one year from satisfaction of a performance obligation and includes no significant financing components.

For more information on our revenue recognition accounting policies, see Note 24 to our consolidated financial statements included in this offering circular.

Changes in Accounting Policies

IFRS 16 Leases

During the fiscal year ended December 31, 2019, we adopted IFRS 16 Leases (announced in January 2016, hereinafter referred to as "IFRS 16").

We have applied IFRS16 retrospectively with the cumulative effect of initially applying the standard recognized at the date of initial application and did not restate comparative information in accordance with IFRS16. In addition, we have applied the practical expedient permitted in IFRS16 and did not apply this standard to contracts that were not previously identified as leases or containing a lease.

As a result of our transition to IFRS16, we recognized ¥12,682 million of right-of-use assets and ¥13,102 million of lease liabilities, and we recognized the difference of ¥420 million as accrued leases payments at the beginning of the fiscal year ended December 31, 2019.

Classification of Expenses

Following the acquisition of IDT and the absorption-type merger of Former Renesas Electronics America Inc. by IDT, we began to integrate our business processes and IT systems from January 1, 2020 for the launch of "One Renesas" operations. In conjunction with the integration, we also decided to revise the classification of expenses in order to better present the financial position and results of operations of our group.

Royalty expenses paid as technology licensing fees were recorded in selling, general and administrative expenses in the past. However, because the percentage of royalty expenses linked to sales revenue has been increasing in recent years, we have decided to divide the royalty expenses into those linked to sales revenue and those not linked to sales revenue, and from the first quarter of the current fiscal year, the portion linked to sales revenue has been classified into cost of sales and inventories as manufacturing costs. In addition, the costs incurred by the department at the head office, which oversees IT infrastructure and company-wide system operations, were previously recorded in selling, general and administrative expenses. However, from the first quarter of the fiscal year ended December 31, 2020, we changed our method of accounting for the IT costs to be recorded in cost of sales and inventories as manufacturing costs as well as research and development expenses (selling, general and administrative expenses) to reflect the nature of the expenses, as it is more appropriate to allocate those costs to the beneficiaries who actually use the infrastructure and systems.

This change in accounting policy has been applied retrospectively to our consolidated financial statements for the fiscal year ended December 31, 2019. As a result of this change, compared with the accounting policy prior to retrospective application, cost of sales for the fiscal year ended December 31, 2019 increased by ¥8,136 million, selling, general and administrative expenses decreased by ¥7,554 million and operating profit and profit before tax decreased by ¥582 million, respectively.

Reflecting the cumulative effect on equity at the beginning of the fiscal year ended December 31, 2019, the beginning balance of retained earnings in the consolidated statement of changes in equity after retroactive application increased by ¥1,192 million. This accounting change has no material impact on earnings per share.

For additional details on changes in accounting policies, see Note 2 "Basis for Preparation, (4) Changes in accounting policy (Changes of the classification of expenses)" to our audited consolidated financial statements included elsewhere in this offering circular.

Disclosure about Market Risk

Foreign Exchange Rate Risk

The international nature of our business exposes us to foreign currency exchange rate fluctuations. In particular, because a significant portion of our revenue is denominated in currencies other than Japanese yen and a small amount of our manufacturing capacity is located outside Japan, we are exposed to foreign exchange risk, primarily related to the U.S. dollar. The strengthening of the Japanese yen against the U.S. dollar would have a negative impact on our financial results. See "—Factors Affecting Results of Operations—Currency Exchange Fluctuations."

Interest Rate Risk

We are exposed to interest rate fluctuations with respect to debt obligations with floating interest rates. When floating interest rates change, our floating rate obligations rise and fall with the market, and we may face increased payments on our floating rate obligations if interest rates increase. Conversely, when interest rates change, our fixed rate obligations do not change and we may miss the opportunity to decrease interest payments on our fixed rate obligations if interest rates fall.

BUSINESS

Overview

We are a leading global semiconductor company that designs, develops, manufactures, markets and distributes a broad range of semiconductor products and solutions with an increasing focus on the complex customer needs of the automotive, industrial, infrastructure and IoT sectors in a variety of applications, such as factory automation, home appliances and data centers.

Our key product types are MCUs, SoCs, analog semiconductor devices and power semiconductor devices, which accounted for approximately 46%, 13%, 32% and 8%, respectively, of our revenue in the fiscal year ended December 31, 2020, with the remaining 2% consisting of non-recurring engineering and other revenue.

We were the number one MCU supplier by revenue in 2020, according to Gartner. In addition, according to our internal estimates based on WSTS research, we had the largest presence within the automobile MCU market, with a 33% share of supply for the fiscal year ended December 31, 2020.

Our leading position in semiconductors has been supported by our industry-leading technological capabilities and strong global customer base, and we believe these key business strengths combined with our sound financial base will help us take advantage of the significant opportunities that are arising within the automotive, industrial, infrastructure and IoT sectors.

Our operations are organized into two reportable segments for financial reporting purposes: Industrial/Infrastructure/IoT Business and Automotive Business. In addition, we account for other businesses not included in these reportable segments under Other in our consolidated financial statements.

- *Industrial/Infrastructure/IoT Business.* This segment primarily focuses on a variety of product categories that are aimed to support various "core/edge/endpoint" applications and society. We primarily supply MCUs, SoCs/MPUs, and analog semiconductor devices in each of these three categories, and focus on application-specific solutions that include products for customers in a variety of applications, such as data centers, wireless infrastructure, PCs/tablets, factory automation, smart meters and home appliances, all of which are tailored to our customers' requirements as well as for a wide variety of applications for a broad customer base that includes general-purpose applications.

  For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from the Industrial/Infrastructure/IoT Business segment represented 50.8% and 47.4%, respectively, of consolidated revenue for each period. In addition, revenue for the fiscal year ended December 31, 2020 from our industrial, infrastructure and IoT businesses accounted for approximately 37%, 26% and 36%, respectively, of our revenue within this segment, according to our managerial accounting data.

- *Automotive Business.* This segment focuses on two primary application fields: "automotive control" and "ADAS/Cockpit." Automotive control consists of semiconductor devices for controlling automobile power train, chassis, gateways and bodies, while ADAS/Cockpit consists of semiconductor devices used in ADAS, automotive information and entertainment systems such as camera sensing systems and In–Vehicle Infotainment (IVI) systems. Between these two categories, we provide solutions for a variety of automobile applications, including those used in xEVs, as well as in ADAS + automotive infotainment & instruments applications, among others. We mainly supply microcontrollers (MCUs), system-on-chips (SoCs), analog semiconductor devices and power semiconductor devices in each of these categories.

  For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from the Automotive Business segment represented 47.6% and 50.7%, respectively, of consolidated revenue for each period. In addition, revenue for the fiscal year ended December 31, 2020 from our "automotive control" and "ADAS/Cockpit" applications accounted for approximately 72% and 27%, respectively, of our revenue within this segment, according to our managerial accounting data.

- *Other.* Our Other business consists of the commissioned development and manufacturing from our design and manufacturing subsidiaries.

For the fiscal year ended December 31, 2020 and the three months ended March 31, 2021, revenue from Other represented 1.5% and 1.9%, respectively, of consolidated revenue for each period.

Our acquisitions of Intersil in 2017 and IDT in 2019 were a significant step in our plans for continued growth. With these acquisitions, we gained access to a vast array of robust analog mixed-signal capabilities in embedded systems. The combination of these products with our advanced MCUs and SoCs has enabled us to offer comprehensive solutions that support the increasing demand of high data processing performance. These solution offerings help bring optimized systems from external sensors through analog front-end devices to processors and interfaces, which enable us to deliver high value-added innovation to our customers. In addition, our acquisition of IDT's products has enabled us to extend our reach to fast-growing data economy-related applications, including data center and wireless infrastructure and has strengthened our presence in the automotive, industrial, infrastructure and IoT sectors.

We have begun capitalizing on the integration of IDT by offering new complementary Analog + Power + Embedded Processing product combinations that work together to deliver comprehensive solutions that help customers accelerate their designs and get to market at a faster rate. These combinations, which we call our "Winning Combinations," focus on verticals including industrial, infrastructure, automotive and consumer.

Moving forward, we plan on growing both our Industrial/Infrastructure/IoT Business and Automotive Business segments based on the dynamics inherent in their respective industries. We also aim to focus on enhancing the ease-of-use for our customers by making greater use of software solutions.

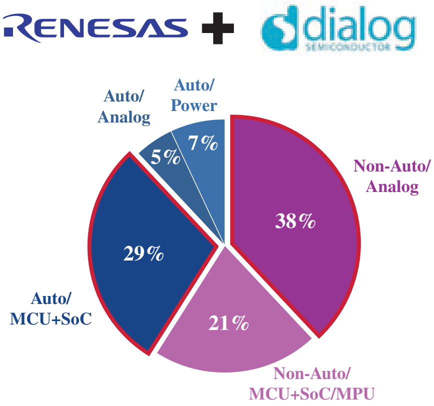
Our planned acquisition of Dialog is also a key factor in our growth strategy. We expect the acquisition to contribute to our growth strategy by further expanding our portfolio in delivering comprehensive solutions to improve performance and efficiency in high-computing electronic systems and enabling us to build more robust and comprehensive solutions to serve high-growth segments of the IoT, industrial and automotive segments. In addition, the planned acquisition will enable us to add engineering and design scale in low-power analog mixed signal products. The addition of Dialog's strong R&D and geographical presence will also allow us to expand our line-up of innovative solutions and make our go-to-market initiatives more effective to provide seamless and borderless services to our customers around the globe. For more information on our planned acquisition of Dialog, see "Proposed Acquisition of Dialog" above and "—Our Strategies—Our proposed acquisition of Dialog will increase our presence in analog and non-auto markets, which will accelerate our growth and create synergies" below.

Our Strengths

We are a leading global MCU, SoC and analog supplier with a strong presence in numerous diversified applications & products that serve both the automotive and non-automotive sectors.

We were the number one MCU supplier by revenue in 2020, according to Gartner. In addition, according to our internal estimates based on WSTS research, we have a leading presence in the automobile MCU market, with a 33% share of supply for the fiscal year ended December 31, 2020. We also had the third largest position for non-auto / analog products according to Gartner research for the fiscal year ended December 31, 2020. We are well-diversified among our two business segments as a result of our acquisitions of Intersil and IDT. Our Industrial/Infrastructure/IoT Business segment accounted for 50.8% of our revenue for the fiscal year ended December 31, 2020 while our Automotive Business segment accounted for 47.6%. On an adjusted EBITDA basis, our Industrial/Infrastructure/IoT Business segment accounted for 57.8% of our adjusted EBITDA while our Automotive Business segment accounted for 42.3% for the fiscal year ended December 31, 2020. See "Selected Financial and Other Data—Non-GAAP Measures."

The below chart shows the illustrative combined application and product revenue mix of Renesas and Dialog calculated based on our management accounting figures and our estimates for Dialog for the fiscal year ended December 31, 2020:



We are well positioned in the Industrial, Infrastructure and IoT subsegments for faster growth by expanding our footprint through inflection points.

We believe that our reputation for robust industrial products capable of weathering extended life cycles and our superior solutions in our industrial, infrastructure and IoT subsegments will help us to secure a significant proportion of the growth attributable to the anticipated expansion of infrastructure equipment such as data centers and wireless infrastructure as a result of the memory module shift from DDR4 to DDR5, new power management specifications, 5G O-RAN and other infrastructure expansions and IoT equipment such as PCs, tablets and industrial equipment such as factory automation. Fueled by the Intersil and IDT integrations, we have also expanded our analog solution lineup. We are poised to extend our share in a variety of fast-growing data economy-related applications, such as PCs, tablets, wireless infrastructure and data centers, with a variety of diverse product offerings that combine our world-leading MCUs, SoCs/MPUs and Analog products.

Within our industrial subsegment, we achieved revenue of ¥133.4 billion for the fiscal year ended December 31, 2020, which consisted of ¥59.4 billion for MCU, ¥39.8 billion for SoC/MPU and ¥34.2 billion for Analog. We aim to achieve growth consistent with the SAM for this sector, and according to Gartner market data, SAM for this segment is expected to grow at a 7.0% CAGR from $42.6 billion in 2019 to $63.7 billion in 2025, with key drivers of robotics applications, human-machine interaction (HMI) and real-time synchronization.

Within our IoT subsegment, we achieved revenue of ¥130.8 billion for the fiscal year ended December 31, 2020, which consisted of ¥67.9 billion in MCU, ¥1.9 billion in SoC/MPU and ¥61.0 billion in Analog. We aim to achieve growth in excess of the SAM for this sector, and according to Gartner market data, SAM for this segment is expected to grow at a CAGR of 6.7% from $66.2 billion in 2019 to $97.7 billion in 2025, with key drivers of connectivity, endpoint computing and power efficiency.

Our first primary strategy for the industrial and IoT sectors is to expand our product lineup and launch new products that enable endpoint intelligence. Second, we are aiming to promote our "deeper and broader" strategy, which aims to increase sales to the same customers and reach a wider range of customers through our "Winning Combinations" of both analog and digital products. See "—Our Strategies—We are aiming to expand into rapidly growing and higher margin areas in the Industrial, Infrastructure and IoT sectors by expanding our product and solution offering capabilities" below.

Within our infrastructure subsegment, we achieved revenue of ¥96.1 billion for the fiscal year ended December 31, 2020, which consisted of ¥3.9 billion for SoC/MPU and ¥92.2 billion for Analog. We aim to achieve growth in excess of the estimated SAM, which is expected to grow at a CAGR of 6.8% from $69.9 billion in 2019 to $104.0 billion in 2025, according to Gartner, with key drivers of data centers and cloud applications, power efficiency and 5G infrastructure. Our primary strategy for this sector is to take advantage of the multiple inflection points and key growth drivers for analog products, such as next-generation DDR5 data centers and 5G infrastructure. See "—Our Strategies—We are aiming to expand into rapidly growing and higher margin areas in the Industrial, Infrastructure and IoT sectors by expanding our product and solution offering capabilities" below.

The SAM for the Industrial/Infrastructure/IoT Business segment as a whole is expected to grow at a CAGR of 6.8% from 2019 to 2025, according to Gartner, and we are aiming to achieve growth in excess of this SAM.

We are a global leader driving sophistication of automotive electronics.

Our strength in the automotive field is founded upon our accumulation of deep and wide-ranging technological know-how in developing and producing semiconductor products that meet the sophisticated quality and reliability requirements that characterize the automotive semiconductor sector, which have been cultivated through our long history of servicing automotive customers.

Within our automotive control subsegment, we achieved revenue of ¥246.8 billion for the fiscal year ended December 31, 2020, which consisted of ¥151.3 billion for MCU, ¥7.2 billion for SoC, ¥35.0 billion for Analog and ¥53.4 billion for Power products. We aim to achieve growth consistent with the SAM for this sector, which, according to Strategy Analytics, is expected to grow at a CAGR of 7.9% from 2019 to 2025.

Within our ADAS/Cockpit subsegment, we achieved revenue of ¥91.3 billion for the fiscal year ended December 31, 2020, which consisted of ¥47.1 billion for MCU, ¥37.5 billion for SoC, ¥5.3 billion for Analog and ¥1.4 billion for Power products. We aim to achieve growth consistent with the SAM for this sector, which, according to Strategy Analytics is expected to grow at a CAGR of 9.7% from 2019 to 2025.

The CAGR for SAM for the Automotive Business segment as a whole is expected to be 8.5% from 2019 to 2025, according to Strategy Analytics.

Our first primary strategy is to promote the launch of next-generation products and solutions within the MCU/SoC space with our leading position in order to further increase our market share. Second, within ADAS/Cockpit and SoCs for automotive control, we are aiming to take advantage of the structural shift in the electronic structure of automobiles by leveraging our hardware and software capabilities. Lastly, we are aiming to utilize a "deeper and broader" strategy in the analog and power fields, aiming to take advantage of the growth within xEVs with our Winning Combinations. See "—Our Strategies—We aim to continue to improve our fundamental positioning and improve our leading position within automotive semiconductors to capture further growth opportunities" below.

We are also leading the transition to next-generation electronic vehicles and believe that next-generation car platforms will enable SoC growth via both scalability and flexibility. Our comprehensive product portfolio enables co-development with OEM & Tier 1 suppliers from the vehicle concept phase. We believe that the change of vehicle architecture from diversified architecture to domain and zone architectures will also play a key role for the next generation of automotive solutions. We also believe that automotive MCU/SoC is a growth driver during the short term, and we have a presence within automotive MCU/SoC of 33%, 28%, 26%, 22%, and 19% for body, xEV, powertrain, Chassis & Safety and ADAS + Infotainment & Instruments, respectively. We have also developed a high-performance platform for automotive information applications, including ADAS applications, called R-Car, which supports the development of systems with the three core automotive ADAS/Cockpit functions of sensing, cognition and infotainment & instruments. The importance of each of these three functions is expected to increase as current generation driver assistance features evolve into more advanced systems in which the driver plays a more passive role in vehicular control, and ultimately give way to fully driverless automobiles. We will build on our successful R-Car chip and system architecture to develop solutions for each of these functions individually, as well as part of our integrated R-Car platform. Revenue from our R-Car products has increased from approximately ¥22 billion for the fiscal year ended December 31, 2018 to approximately ¥36 billion for the fiscal year ended December 31, 2020.

We have cultivated strong customer relationships and have a large and diversified global customer base.

We have strong relationships with our customers worldwide. Our automotive customers include Japanese and global Tier 1 suppliers such as DENSO Corporation, Continental, Bosch, Mitsubishi Electric and Hitachi which in turn sell their components to Japanese OEMs such as Toyota, Honda and Nissan and overseas OEMs such as Audi, BMW, Daimler, Volkswagen and General Motors. Our non-automotive customers include world-class manufacturers such as Siemens AG and Mitsubishi Electric for our smart factory solutions, Samsung Electronics for data centers, and Midea and Daikin for our home appliance solutions.

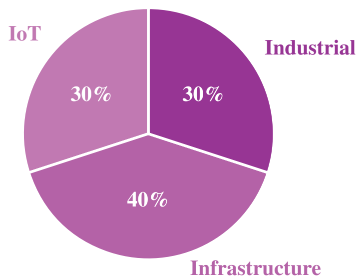
Our customer relationships in Japan date back many decades based on our and our predecessors' position as the country's primary suppliers of semiconductor products, while our overseas relationships have been cultivated through our long history of overseas expansion efforts and M&A. We believe that our customer base in Japan is particularly robust and benefits from the tendency of Japanese customers to place a high value on establishing mutually beneficial relationships with their suppliers.

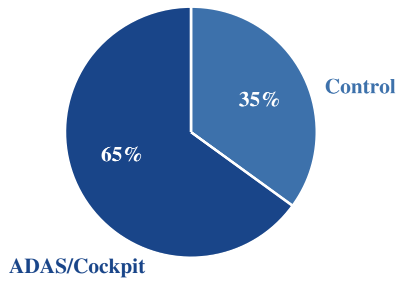
Many of our products, particularly those designed to meet a particular customer's design specifications, are developed in a collaborative process called "design-in," which enables us to provide innovative products that are customized to each customer's exact needs. In addition, through our experience with design-in processes with our customers, we have gained critical customer- and industry-specific know-how, and we have become well-versed in customer-specific design and development practices, which often enables us to shorten the time between commencement of product development and commercialization. The customer- and industry-specific know-how that we have accumulated enhances the loyalty of our customers and encourages customers to contact us again during the early stages of their next product development and planning, thus fueling a virtuous cycle that continuously enhances our experience and know-how, strengthens our market position and heightens the barriers to entry for our competitors that lack comparable customer relationships.

In addition, by securing product design-in opportunities, we can more effectively secure future revenue over the lifetime of such products, which is typically in the range of five to eight years for automotive and industrial applications, and in the range of three to five years for other products. We call the aggregate revenue with respect to a design-in product expected to be realized from the specific customer over the product's lifetime as "lifetime value," or LTV (Life Time Value). We have recently experienced an overall increase in total LTV as a result of our design-in efforts, including the design-in efforts made following our acquisitions of Intersil and IDT as a result of our cross selling and winning combination solutions.

For our Industrial/Infrastructure/IoT Business segment, we have been awarded design-ins with an estimated total LTV of ¥512 billion and ¥610 billion for the fiscal years ended December 31, 2019 and 2020, respectively. For the same periods, we increased our percentage of LTV for design-in solutions that utilize our winning combination solutions within our total design-in LTV for this segment from 2% to 12%. For our Automotive Business segment, we achieved design-ins with an estimated total LTV of ¥451 billion (including additional pro forma amounts from former IDT for the six months ended June 30, 2019) and ¥720 billion for the fiscal years ended December 31, 2019 and 2020, respectively. For the same periods, we increased our percentage of LTV for design-in solutions that utilize our winning combination solutions within our total design-in LTV for this segment from 0% to 11%.

The below graphs show the breakdown of our design-in LTV by product for our Industrial/Infrastructure/IoT Business segment and Automotive Business segment for the fiscal year ended December 31, 2020:





LTV is a measure that we have formulated and used internally for management's assessment of business performance and strategic initiative planning. The LTV formula involves a considerable degree of future estimation and subjective judgment, including estimating volumes and per-unit prices of products to be purchased in the future, as well as the estimated lifespan and likelihood of cancellation of particular product models. We may change and in fact have in the past changed our LTV calculation formula, and thus a direct period-to-period comparison may not be meaningful beyond describing very general trends over an extended period. Potential investors are cautioned not to place undue reliance on LTV.

We have a successful track record of M&A strategy execution and successful integration of prior acquisitions.

We have consistently and successfully executed on our M&A strategy in recent years. Since 2016, we have diversified our product mix by moving towards analog and mixed signal products especially through our acquisitions of Intersil and IDT. According to our estimations, we will have increased our proportion of revenue from analog applications by 30 percentage points and reduced our reliance on MCU products by 19 percentage points comparing our standalone revenue breakdown in 2016 to the revenue breakdown of us and Dialog for 2020 on a simple combined basis. We have also diversified our talent in recent years, and will have achieved an increase in overseas R&D engineers by 28 percentage points and an increase in engineers in our analog and power applications by 24 percentage points from 2017 to 2020 on a simple combined basis accounting for the planned Dialog Acquisition as of July 2017 without including figures from Intersil. Moreover, our acquisitions of Intersil and IDT and our planned acquisition of Dialog are leading to a diversification of our revenue sources, with greater shifts to data center, infrastructure and other industrial applications. We expect the Dialog

Acquisition to further contribute to diversification of our revenue base, with non-automotive revenue of Dialog and Renesas on a simple combined basis increasing 15 percentage points compared to our non-automotive revenue in 2016.

In the case of both Intersil and IDT, we were able to successfully achieve cost synergies in excess of our initial targets and plans. For Intersil, we initially targeted short-term cost synergies of $40 million on an annual run rate adjusted operating profit basis compared to Intersil's forecasted costs and revenue for the fiscal year ended December 31, 2016 and have managed to achieve $63 million of gross savings on an annual run rate basis as of December 31, 2020. For IDT, we achieved gross savings on an annual run rate basis of $136 million as of December 31, 2020 compared to our initial targeted plan of $80 million, which we calculated by comparing to IDT's forecasted costs and revenue for the fiscal year ended December 31, 2019. We achieved these cost synergies due to increased efficiencies in our organization, operations and the use of our patent and design tools, in addition to improvements in our distribution margins and procurement policies. Moreover, we achieved significant revenue synergies by acquiring new customers and increasing sales per customer, with the number of new customers classified as Industrial/Infrastructure/IoT Business segment customers increasing from 13,980 to 20,560 and LTV from new design-in opportunities from $129 million to $1,570 million comparing the fiscal years ended December 31, 2019 and 2020.

We possess a sound financial base and strong cash-flow generation capabilities to support our business and further growth.

Through our successful implementation of our "One Global Renesas" plan and our integration of both Intersil and IDT, we have been able to significantly strengthen our financial position and our cash-flow generation capabilities in recent years. Our adjusted EBITDA has increased from ¥199.7 billion for the fiscal year ended December 31, 2018 to ¥223.2 billion for the fiscal year ended December 31, 2020. Our sound financial base and solid cash flow enable us to respond flexibly to the business environment as it changes, including the ability to take advantage of inorganic growth opportunities as they may arise in the future and quick deleveraging for flexible financing for investments.

We also have a track record of maintaining a well-controlled inventory base by utilizing both DOI (Days-of-Inventory) and WOI (Weeks-of-Inventory) metrics in order to understand the appropriate level of both in-house and sales channel inventories to meet demand. In addition, we have been able to improve our inventory management in recent years as measured by our turnover. In addition, we have managed to achieve fixed cost reductions in recent years from declines in depreciation, early retirement programs and integration cost synergies from our acquisitions of Intersil and IDT. We have also been able to achieve significant reductions in our selling, general and administrative expenses as a percentage against revenue, with improvements due to the outsourcing of certain administrative tasks and we expect to achieve further reductions by reducing logistics costs and spending on information technology in the future.

We have a diversified management team and an innovative corporate structure that have helped in accelerating the realization of our "One Global Renesas" initiative.

We have a global management team from a variety of diverse backgrounds that is highly experienced and possesses solid industry knowledge. In contrast to certain other Japanese corporations and corporate structures, we have been open to inviting talented executives from outside the company and have successfully integrated a number of high-level executive personnel from our past acquisitions, while also utilizing executives with extensive experience at Renesas. Our management is also committed to a variety of environmental, social and governance (ESG) initiatives, and we have achieved recognition for such initiatives around the world.

Following the acquisition of IDT, our management team has successfully utilized organizational reforms of our business under our "One Global Renesas" initiative, which involved the reorganization of our business into two separate financial reporting segments in order to more appropriately disclose our financial figures and in a way that thoroughly integrates the operations of both Intersil and IDT.

We possess industry-leading technological capabilities with advanced manufacturing know-how.

We possess cutting-edge technological capabilities backed by a long operating history and a strong track record supporting our position as a technological leader in our industry. We have led and cultivated our industry's technological development and continue to do so through the launch of state-of-the-art, high quality and high reliability products. Significant developments in semiconductor performance are achieved through miniaturization of the semiconductor fabrication process, which allows finer and more complex circuitry to be printed for a given surface area.

Our Strategies

Our proposed acquisition of Dialog will increase our presence in analog and non-auto markets, which will accelerate our growth and create synergies.

Dialog is an innovative provider of highly-integrated and power-efficient mixed-signal ICs for a broad array of customers within the IoT, consumer electronics and high-growth segments of the automotive and industrial sectors. For the fiscal year ended December 31, 2020, Dialog achieved revenue of $1,376 million, underlying gross profit of $697 million, underlying operating profit of $297 million and underlying EBITDA of $357 million, with underlying gross margins of 50.6%, underlying operating margins of 21.6% and underlying EBITDA margins of 25.9%. See "Proposed Acquisition of Dialog—Selected Financial Information of Dialog—Non-IFRS Measures." Dialog brings a wide range of product offerings, with 58% of their revenue from their Custom Mixed Signal segment, and 20% from their Advanced Mixed Signal segment for their fiscal year ended December 31, 2020. We believe that the acquisition of Dialog's low-power and mixed-signal technologies will enhance our product portfolio and help our expansion into high-growth segments within the IoT field.

Following the licensing of their power management technologies to Apple in 2019, the growth composition of Dialog's revenue has changed in recent years, with revenue of licensed legacy products decreasing at a CAGR of 35% from $867 million for the fiscal year ended December 31, 2018 to $363 million for the fiscal year ended December 31, 2020, while revenue of new custom mixed-signal products for Dialog's largest customer has increased at a CAGR of 65% from $149 million for the fiscal year ended December 31, 2018 to $407 million for the fiscal year ended December 31, 2020 and its other revenue has increased at a CAGR of 19% from $426 million for the fiscal year ended December 31, 2018 to $606 million for the fiscal year ended December 31, 2020. In addition, Dialog's underlying revenue excluding licensed legacy products and new custom mixed-signal products for Dialog's largest customer has shown growth in recent quarters, with year-on-year growth of such revenue increasing from negative 6% in the three months ended March 29, 2019 to 20% in the three months ended March 27, 2020 and 76% in the three months ended April 2, 2021.

We believe that bringing together Renesas and Dialog will extend the combined group's reach to a broader customer base and open up additional growth potential in certain key growth segments. In addition, we hope to expand our customer reach with the use of our larger sales force and distribution channels and take advantage of new cross selling opportunities. Moreover, we plan on utilizing our Winning Combinations to further increase the sales of our existing products by being able to provide our customers with an even broader range of products and applications. We believe that the addition of Dialog's strong R&D and geographical presence will also allow us to expand our lineup of innovative solutions and make our go-to-market initiatives more effective to provide seamless and borderless services to customers around the globe. By utilizing increased scale, we will be able to further shift our commercial positioning to non-automotive and analog products.

We are currently targeting incremental revenue growth of approximately $200 million, primarily from cross selling and access to fast-growing industries alongside continued innovation of solution offerings, which we are targeting to realize in approximately four to five years after closing. We are also targeting cost savings from operational efficiencies with a targeted financial impact of approximately $125 million, which we are targeting to be realized within approximately three years after closing. Within cost of sales, we believe we will be able to take advantage of benefits of scale in both procurement and distribution, while also being able to reduce corporate expenses, reduce outsourcing and optimize our organizational structures to reduce our selling, general and administrative expenses. Moreover, we expect benefits in reducing our research and development expenses, with various efficiencies of scale in software licensing and other support as well as certain other project efficiencies.

We also anticipate the Dialog Acquisition to be accretive to our earnings per share. On a simple combined basis calculated using our adjusted profit and Dialog's underlying net income, including adjustments for the offering of shares described herein as well as an increase in interest expenses, we estimate that our adjusted EPS would have increased from ¥64.84 to ¥71.33, or approximately 10.0%, for the fiscal year ended December 31, 2020. For additional information about the Dialog Acquisition, our summary pro forma financial information and the simple combined adjusted financial information, see "Proposed Acquisition of Dialog—Unaudited Pro Forma Financial Information."

We will endeavor to implement the initiatives and achieve the long-term financial goals set forth in our mid-term growth strategy.

On February 17, 2020, we announced our mid-term growth strategy and financial model, which established, among other things, certain long-term financial and other targets. We have set a long-term target of achieving sales growth exceeding that of the market through concentrated investment of management resources in the segments on which we are focusing our attention.

These long-term targets are as follows. Note that such targets reflect non-GAAP adjustments to exclude amortization of intangible assets, noncash expenses such as stock-based compensation expenses, acquisition-related costs and one-time expenses:

- adjusted revenue (continuing business only) growth greater than the growth of the SAM (as defined by Renesas);
- achieving an adjusted gross margin (continuing business only) of 50%; and
- achieving an adjusted operating margin (continuing business only) of over 20%.

We have also set out long-term targets for our Industrial/Infrastructure/IoT Business segment, which are as follows:

- adjusted revenue (continuing business only) growth greater than the growth of the SAM (as defined by Renesas);
- achieving an adjusted gross margin (continuing business only) for the segment of 55-60%; and
- achieving an adjusted operating margin (continuing business only) for the segment of 25-30%.

We have also set out long-term targets for our Automotive Business segment, which are as follows:

- adjusted revenue (continuing business only) growth in line with the growth of the SAM (as defined by Renesas);
- achieving an adjusted gross margin (continuing business only) for the segment of 40-45%; and
- achieving an adjusted operating margin (continuing business only) for the segment of 10-15%.

In determining these targets, we have made various important assumptions with respect to the macroeconomic and other general environment as well as the factors that we anticipate will affect our business. In particular, as part of our key assumptions, we have assumed:

- that the current levels of key economic indices would remain generally unchanged;
- a yen/U.S. dollar exchange rate of ¥100 = U.S.$1 and a yen/Euro exchange rate of ¥120 = €1;
- adjustments for our 6” fab shutdown and other structural reform-related EOLs as well as the reclassification of parts of SG&A to cost of sales and R&D expenses;
- that NREs and sales outside of our business units are excluded; and
- that there will be no significant change in the competitive environment, and that no unexpected disruptive technologies in the industries in which we compete will be developed or introduced.

We aim to achieve these targets by optimizing production efficiency, improving our product mix and continuing to realize synergies from the integration of IDT. In addition, we aim to achieve our gross margin target by increases via depreciation, product mix, volume & others and structural reform. In the fiscal year ended December 31, 2020, we achieved adjusted gross margins (continuing business only) of 48%, and expect to be able to achieve our long-term target with continued depreciation and structural reform benefits, despite headwinds from the fire at our Naka plant. These long-term targets do not reflect any of the expected synergies or benefits from our planned acquisition of Dialog, which are described above in “—Our proposed acquisition of Dialog will increase our presence in analog and non-auto markets, which will accelerate our growth and create synergies.”

We are aiming to expand into rapidly growing and higher margin areas in the Industrial, Infrastructure and IoT sectors by expanding our product and solution offering capabilities.

Within our Industrial/Infrastructure/IoT Business segment, we are aiming for faster-than-market growth and improvements in our gross margins among our diverse variety of products. We intend to pursue these goals by using our stable and superior current positioning as solid footing for expansion into rapidly growing and higher margin segments within our targeted sectors. Specifically, we intend to use our cutting-edge technology to capture an outsized share of newly developing and rapidly growing areas within these sectors. At the same time, we believe that our acquisitions of Intersil and IDT and the addition of their industry-leading analog solutions to our product line-up, as well as the addition of their existing customer base to ours, will allow us to access and capture revenue in the already large, continuously expanding and higher margin field of analog devices.

We believe that there are a number of inflection points for the Industrial/Infrastructure/IoT Business segment, with new opportunities arising from both data centers and for 5G wireless infrastructure. According to our internal research, new generations of data centers will lead to an increase in the U.S. dollar value of the analog semiconductor contents per DDR5 server of over two times when compared to the prior DDR4 generation, with this growth coming from memory interface and timing products. In addition, we also believe that there are opportunities within both core and edge 5G wireless infrastructure with the potential future shift to Open-RAN 5G architecture and its use of central units and distributed units. For the 4G generation, our SAM is mainly for edge-use application cases. However, under the potential new 5G O-RAN infrastructure, which we believe will gradually replace the legacy systems over time, these core baseband units may be replaced with central units and distributed units that are composed of standard servers and software, which will lead to a new SAM growth opportunity. In addition, we expect a greater increase in the SAM for our edge products that are used in array antennas and remote radio head in the continued transition from 4G to 5G infrastructure.

In addition, we believe that endpoint use cases will also allow us to utilize our leading cloud-native edge computing solutions, such as those with wearable devices. The trend for IoT devices is for cloud computing to utilize big data and analytics to analyze the data that is acquired by sensors in devices, which can be done with our MCU products. In addition, we have recovered from prior market weakness and expanded our strong market positions for both 16-bit and 32-bit MCUs, with a 28% and 9% share for the fiscal year ended December 31, 2020, respectively, according to our internal estimates based on WSTS research. In addition, there has been a shift towards new technology and new products within these sectors, as new product releases and higher performance models have contributed to MCU sales growth for more diversified applications. We plan to continue to take advantage of these trends, as we have expanded our reach to these higher performance models with our open MCU/MPU strategy, wherein we have been diversifying into new end-use applications with our RA ARM and RISC-V products. In addition, we have also greatly expanded the release of our new RA, RL78 and RX lines of products, which increased from 5 products in 2017 to 95 products in 2020. We have also been able to improve our cost competitiveness significantly in recent years, exemplified by the manufacturing cost of one of our popular MCU products being reduced by approximately 45% from 2018 to 2020.

We also plan to utilize a “deeper and broader” strategy for the expansion of our customer coverage. With channel reinforcement, we intend to strategically engage with fewer distributors to strengthen our relationships and engineering support and have reduced the number of our distributors within Japan in recent years from 18 to 8 and from 50 to 34 outside of Japan for our Industrial/Infrastructure/IoT Business segment from the beginning of 2019 to the end of 2020. This concentration of distributors has helped lead to volume discounts by increasing the amount of business per partner and expansion of our customer base. For example, from the fiscal year ended December 31, 2019 to 2020, we achieved an increase in our revenue of 17% for distributors outside of Japan, while revenue decreased by 10% for Japanese distributors and remained virtually unchanged for direct sales. In addition, through the use of catalog distributors, we plan to enhance our e-commerce initiatives for wider customer coverage, which has led to approximately a 1.5 times increase in the number of our new customers from 13,980 in the fiscal year ended December 31, 2019 to 20,560 in the fiscal year ended December 31, 2020. As an example of our strength in e-commerce, we have increased the total number of MCU SKUs for two e-commerce distributors from 482 in the three months ended March 31, 2020 to 1,127 in the three months ended March 31, 2021. Moreover, we plan to continue to increase our web and digital marketing efforts to support our customers online, such as with our Lab on the Cloud platform, Virtual Booth system and our MCU Guide App.

We have been taking advantage of new opportunities within various higher growth areas, such as network time controls, including those utilized in 5G networks and factory automation, pulse oximeters used in various healthcare and fitness devices and low power wireless connectivities, such as those used for smart utility meters, surveillance cameras and street light control. We believe that there is an opportunity to continue to take advantage of the variety of devices that are necessary for these products, with a combination of MPU/MCU, analog and power products all leading to increased revenue opportunities.

We aim to continue to improve our fundamental positioning and improve our leading position within automotive semiconductors to capture further growth opportunities.

As a large contributor to our overall revenue, we aim to continue to enjoy stable revenue from our Automotive Business segment and, in particular, from our base automotive MCU/SoC domain. We also intend to continue to increase our operating margin within this segment and further strengthen our position within our core domain by continuing to pioneer and market industry-leading products that further bolster our strong reputation and customer relationships.

According to Strategy Analytics and LMC Automotive, the U.S. dollar value of the semiconductors used per vehicle is expected to grow at a 6.1% CAGR from $415.8 in 2019 to $593.3 in 2025 with light vehicle unit growth of 2.2% CAGR from 88.9 million units to 101.4 million units for the same period. As a result of these trends, Strategy Analytics forecasts a 8.5% increase in CAGR for total semiconductor demand for light vehicles, growing from $37.0 billion in 2019 to $60.2 billion in 2025. We believe we can use our solid footing within the automotive MCU domain to propel us into advanced MCU applications and to the growing opportunities relating to luxury smart cars and electric vehicles shown by this expected growth.

As a technology leader in process node advancement, we have continued to reap the benefits of our development of 40 nm process MCUs, with growth from approximately ¥38 billion in 2018 to approximately ¥71 billion in 2020, and we believe we can continue to use our technological advantages to win a larger share of design-in opportunities with the upcoming shift to next-generation (28 nm) products as well. In addition, according to our internal estimates based on WSTS research, we have grown our automobile MCU share of supply from 30% for the fiscal year ended December 31, 2018 to 33% for the fiscal year ended December 31, 2020. Moreover, we believe that the scalability and power efficiency of our R-Car platform products are well-suited to next-generation car platforms that contain infotainment and ADAS systems.

In addition, with the advancement of the next generation of automotive solutions, we believe that the importance of software development and collaboration with our OEM and Tier 1 supplier customers is rapidly increasing. As next-generation automobiles continue to be introduced, we have seen a shift from diversified architecture, that are categorized by independent MCUs, to more advanced systems such as domain or zone architecture. These new systems utilize MCUs and SoCs in a hierarchy, which necessitates greater use of high-performance chips and a structure that requires increased compatibility between hardware and software. We plan to take advantage of this shift by providing products that we believe have a higher level of compatible software and hardware IP compared to our competitors and also provide the flexibility to enable agile development, which allows us to collaborate with our customers from the initial stages of development. We believe that we can differentiate ourselves from our competitors and increase our market share by taking advantage of our scalability and by combining the performance advantages of our core MCU/SoC products.

We also plan on using a "deeper and broader" strategy to expand our power and analog products, which we believe will drive future growth. According to Strategy Analytics, there is an expected demand expansion of xEV products from $1,498 million in 2015 to $11,495 million in 2025, representing a 23% expected CAGR. We plan to focus primarily on power devices (such as IGBT products) and battery cell monitor (BMIC) products to capture these market opportunities in the medium term. In addition to MCUs, we believe power and analog devices will grow rapidly, where we have a strong and growing position following our acquisitions of Intersil and IDT and our planned acquisition of Dialog. We have developed a comprehensive product portfolio for xEV system architecture that we believe will allow us to meet the demands of our customers and take advantage of this xEV growth.

Furthermore, we have used our Winning Combinations to focus on specific high-growth opportunities within these areas, such as utilizing MCUs with additional analog/power products for EV battery management, EV inverter management and in-car wireless chargers. For example, the addition of BMICs to our MCU products has led to an increased revenue opportunity of 5.2 times for EV battery management solutions, 3.1 times for EV Inverter Management and 3.8 times for in-car wireless chargers by including new products to our MCUs. We have achieved these winning combinations by utilizing faster time-to-market by reference designs and a variety of ready-to-use solutions, such as using ASIL D compliant system-level solutions and industry-leading measurement accuracy for our EV battery management products. In addition, we believe the integration of Intersil, IDT and Dialog's products and technology into our product mix will allow us to improve the attractiveness of these Winning Combinations by improving solution cost, functionality, quality and after-sale support.

We will continue to pursue supply chain evolution through multiple initiatives.

We are currently striving to strengthen our supply chain to increase our customers', business partners', and our own corporate value. For example, we have also been utilizing more effective methods for our supply chain, such as by utilizing direct shipment methods. By bypassing internal sales companies, we are able to improve our transaction efficiency by changing Incoterms and integrating our business processes while also improving the efficiency of our logistics processes with more optimized warehousing and logistics routes.

In recent years, we have also begun to change the way we receive orders and our approach to inventory management. In the past, production arrangements were heavily based on forecasting, where the customer had no responsibility to pick up the product, which led to an increased risk of losses and unexpected increases in inventory due to fluctuations in the product mix caused by longer production lead times. In response, we have begun to gradually implement our "die-bank" system, which holds inventory in the form of wafers rather than finished products for greater versatility that allows us to respond to customer orders in a timely manner while keeping inventories low. We plan to increase the coverage of our products covered to 100% in future years to this "build-to-order" production system.

We aim to continue to integrate our acquisitions as well as pursue potential new investments while implementing a balanced capital strategy to maximize shareholder value.

For long-term maximization of shareholder value, we intend to take a balanced approach to capital allocation in growth areas, optimization of our capital structure and shareholder returns. In addition to organic growth from our existing initiatives, we will leverage the expertise from our prior acquisitions in evaluating additional acquisition opportunities and seeking other accretive investment opportunities. We are also reducing our fixed costs and operational leverage while taking a pragmatic approach between stock buybacks and dividends.

We regularly evaluate opportunities to bolster our business through strategic acquisitions, such as with our acquisitions of Intersil and IDT and our proposed acquisition of Dialog. In addition to our long-standing collaborations with existing customers, we will continue to seek new strategic partnerships and alliances with third parties in order to supplement product and technological areas that we believe will further enhance the competitiveness of our product offerings.

Our organizational structure provides us with the flexibility and focus to grow our presence in our target segments. We will continue to evaluate our organizational structure and make the appropriate investments and adjustments needed to maximize the implementation of our growth strategies while retaining our core personnel and capitalizing on our cross-product synergies, including building on the gradual accumulation and generation of revenue and cost synergies from our recent acquisitions.

We aim to continue to maintain a disciplined capital allocation policy that balances our core priorities of growth investment (including disciplined capital expenditures and possible strategic acquisitions, which may include the issuance of new shares in connection therewith), financial position management (including maintaining optimal leverage and consciousness of return on equity) and shareholder return (including the possibility of future dividend payments and share buybacks). We also have strong cash flows and the ability to quickly deleverage, which we plan to do in the coming years. As of December 31, 2020, we would have recorded a net debt to adjusted EBITDA ratio of 3.9x on a pro forma basis accounting for the Dialog Acquisition and expect this ratio to decrease on a pro forma basis to 3.1x after this equity offering (calculated based on the offer price of ¥1,174 a share and the number of new shares of Renesas common stock to be issued in the global offering of 182 million, which represents the number of new shares of common stock that will be issued in the global offering, assuming the over-allotment options are not exercised). We are targeting to achieve a net debt / adjusted EBITDA ratio of 1.0x over the next two years or longer. We have calculated the pro forma net debt figures presented above based on the pro forma financial information shown in "Proposed Acquisition of Dialog—Unaudited Pro Forma Financial Information."

The discussion above includes forward-looking statements, such as the anticipated synergies with Dialog, that are based on various assumptions and beliefs, including but not limited to the assumptions set forth above as well as the non-occurrence of the various risks set forth in "Risk Factors—Risks Related to Our Business and Industry" and "Risk Factors—Risks Related to Our Proposed Acquisition of Dialog" and elsewhere in this offering circular. Many of these assumptions and beliefs relate to matters that are outside of our control, including factors affecting the business and economic environment. In addition, there can be no *assurance as to our ability to implement our various strategic initiatives. In establishing our long-term financial goals, we did not set or disclose any particular timeframe by which we seek to achieve such goals, and while we will endeavor to achieve such goals as soon as reasonably practicable under the given business environment and other circumstances, we cannot give you any representation or even indication or suggestion about such timeframe at this time. The description of our previous financial targets and results included above should not be used to draw any conclusions with respect to when, or even if, our current long-term financial goals may be achievable. These and other unanticipated events and circumstances could affect our ability to meet the financial goals set forth above. As a result, we cannot and do not make any representation or assurance as to the achievability of such financial goals or whether our underlying assumptions are appropriate. You should be aware that actual results may vary, potentially materially, from the above forward-looking statements. See "Forward-Looking Statements."*

Principal Products and Applications

We divide our primary products among the following five application fields across our two business segments, where we believe we possesses particular strengths and can compete most effectively:

Industrial, IoT and Infrastructure, which comprise our Industrial/Infrastructure/IoT Business segment and Automotive Control and ADAS/Cockpit, which comprise our Automotive Business segment.

	Industrial/Infrastructure/IoT Business			**Automotive Business**	
	Industrial	**IoT**	**Infrastructure**	**Automotive Control**	**ADAS/Cockpit**
Key Applications	Factory Automation Multifunction Printer Building Automation Utility Meters	PC/Tablets Home Electric Appliance/Home Electronics Broad-based Products	Data Center Wireless Infrastructure	Powertrain xEV Vehicle Body Chassis and Safety Gateway	ADAS Cockpit Other Infotainment and Instruments
Primary Products	**MCU** (RX Family RL78 Family, RA Family Renesas Synergy) **MPU** (RZ Family) **Analog** (Timing devices, PMIC, Sensor Conditioner)	**MCU** (RX Family RL78 Family, RA Family Renesas Synergy) **Analog** (Timing devices, PMIC, OIS, Fuel gauge IC)	**Analog** (Memory Interface, Timing devices, PMIC, RF)	**MCU** (RH850 Family, RL78 Family) **Analog** (BiC-DMOS, BMIC, Sensor Conditioner) **Power** (IGBT, MOSFET)	**SoC** (R-Car) **MCU** (RH850 Family) **Analog** (PMIC, Digital video signal processor)

Industrial/Infrastructure/IoT Business

Industrial Subsegment

We are a leading MCU and SoC/MPU supplier and deliver easy-to-implement real-time solutions for factory automation equipment and other applications. Autonomous production is enabled through safe and secure sensors, drives, networks and controls; end-point observation and control are enhanced with embedded AI technologies. We also offer extensive offerings such as multi-protocol connectivity, time sensitive networking (TSN) and real-time processing. Our industrial subsegment consists of approximately 45% MCU products, approximately 30% SoC/MPU products and approximately 26% analog products, according to our internal management accounting data for the fiscal year ended December 31, 2020.

We provide various products including: MCUs (RX Family) and MPUs (RZ Family) for manufacturing equipment and industrial robots, MCUs (RX, RL78) for home automation and home connectivity applications, and MCUs (RX Family) for smart meters. In recent years, increased eco-friendliness of industrial equipment through low power capability has become a hot topic for development of industrial equipment to meet the needs of our customers. Our inverter management solutions provide one method of achieving low power capability by controlling a device's motors, where significant power consumption occurs. We have also developed MCUs implementing Silicon on Thin Buried Oxide (SOTB) structure that can be embedded in applications to allow industry leading low-power consumption in standby mode. In addition, our integration of Intersil's power management technology into our solutions has expanded our ability to meet the growing demand for low power consumption devices. The introduction and development of embedded artificial intelligence (e-AI) applications in which the results of deep learning is embedded in component level devices, will drive further advancements in both component and IoT technologies, which we had identified and begun developing in 2015. In addition, our acquisition of IDT and the integration of their sensor technology to our existing line-up has allowed us to provide more comprehensive solutions, such as products relating to IoT building automation air quality control through the combination of Renesas MCUs and IDT gas and humidity sensors.

The growth and expansion of factory automation applications is well established. Industrial robots are increasingly replacing or assisting human workers, and factory automation in general is delivering improved efficiency and stability. A very significant development in this area is the trend toward increased connectivity, with industrial networks that support such applications by linking all elements of production systems to one another and to the internet. In the area of Industrial IoT, the industry trend is toward increased connectivity, autonomous and interactive machines and flexible manufacturing to improve operations and reduce costs. With Industry 4.0, the number of sensor nodes in the factory will increase exponentially, driving the need for more bandwidth in the network in order to move more data and improve analytics, and raising the question of how such a large quantity of data can be handled in real time.

To respond to these needs, we provide MPUs (RZ Family) that include CPUs specialized for real-time control, high-speed data processing and energy efficient hardware Ethernet accelerators and hardware real-time OS accelerators. The integration of dedicated hardware accelerators allows the MPUs to offer significantly more processing power for applications than similar CPU designs without such accelerators. We also offer various other solutions for development of functions devised in cooperation with the development members of the factory automation-focused consortium which we established in 2014 to encourage information sharing and cooperation among members and to promote our position as a leader in this area by providing information about Renesas and our industrial solutions.

In factory automation and building automation, we have a leading position for MCUs and MPUs, especially for motor control. With the recent advancement of the Industrial IoT to implement network connections in factories for increased efficiency, there are growing demands for network devices with support for industrial network protocols enabling real-time processing, protocol gateway functionality, protected networking functionality, and support for network redundancy protocols to ensure highly reliable and efficient communication. To address these needs, we offer a variety of industrial ethernet and other solutions to accelerate the development of industrial applications such as drive equipment, controllers, sensors and telecommunications equipment. We also offer an extensive product portfolio of high-performance, flexible timing ICs, leading interconnect solutions, signal integrity products, and advanced power management solutions.

IoT Subsegment

We offer a variety of power management ICs (PMICs) in our IoT subsegment. Our PMIC portfolio includes a variety of ultra-small, high-efficiency PMICs that are ideal for a wide range of consumer, industrial and networking devices including smartphones, tablet computers, solid-state drives, and networking and wireless IoT devices, as well as application specific PMICs for a wide range of automotive, consumer, industrial, and networking applications including automotive displays, notebooks and tablets. As a result, we offer a broad range of products that are used for a wide variety of applications, such as automotive and industrial, within our IoT subsegment. We also enable homes in which items of everyday use are made intelligent and are thus able to learn and adapt to the changes that take place in and around us. We are working to create an active two-way relationship between people and their homes. We offer technologies such as motor control, human-machine interface (HMI), and functional safety for applications for white goods, cooking appliances, and small home appliances, to help in accelerating product development. In addition, we support the realization of smarter products by offering sensing, network security, recognition, and advanced e-AI technologies. We are a leading provider of both proprietary and Arm MCUs and we provide a wide variety of products, such as our SOTB, e-AI and security products. Our IoT subsegment consists of approximately 52% MCU products, approximately 47% analog products and approximately 1% SoC/MPU products, according to our internal management accounting data for the fiscal year ended December 31, 2020.

Our PMIC products may have a combination of the following functions: DC/DC conversion, battery charging, linear regulation, power sequencing, and other miscellaneous system power functions. We also offer a broad portfolio of ICs for wireless charging that are suitable for applications such as smartphones or wearables. With the reduction of power consumption that our PMIC products allow, such products can also help contribute to our primary climate change initiative of aiming to be carbon neutral by 2050.

The growth and expansion of home appliances like air-conditioners, washers, and refrigerators is also well established. A demand for those applications in developing countries is expected to rise steadily, and a proliferation of electricity efficient inverter control technology and human machine interfaces (HMIs) for IoT are accelerating the growth of semiconductors contents. To respond to these needs, we provide MCUs (RX, RL78 Family) that include leading IPs for inverter control or a unique touch key IP that is an ideal fit for devices designed with challenging, non-traditional touch materials, or required to operate in wet or dirty environments, such as a kitchen or bathroom.

Infrastructure Subsegment

We aim for a society in which all buildings and machines are connected; this intelligent environment creates a sustainable baseplate allowing the advancement of society. We are one of the leading memory interface, timing clock and power management solution suppliers and have strong relationships and engagement with hyperscalers, server makers and memory makers. We are a technology leader in RF for 5G and massive MIMO. Our infrastructure subsegment consists of approximately 96% analog products and approximately 4% SoC/MPU products, according to our internal management accounting data for the fiscal year ended December 31, 2020.

Fueled by the Intersil and IDT integrations, we have expanded our analog solution lineup. We are extending our presence in fast-growing data economy-related sectors such as in data centers and wireless infrastructure, with analog products such as memory interface, timing clock, RF, opto, and power management solutions. In data centers, our high performance, specialized functionality for timing fluctuations and broad portfolio for power products address the needs of modern enterprise server systems. We also have achieved a leading share for memory interfaces designed for use in data centers. We offer cutting-edge analog, power and mixed signal RF products that manage the increased amount of data and video being transmitted via the cloud.

In addition, we are aiming to provide a number of solutions for the Open Radio Access Network initiative, or O-RAN, which utilizes standardization and interoperability for components from a variety of suppliers to communicate together over the cloud. We believe that this synchronization plays an increasingly crucial role in the transition to 5G networks and our products can enable our communications customers to introduce next-generation solutions with superior performance and reliability. O-RAN enables virtualization of functions associated with control units, distributed units and the semiconductors for the units will be the same type as for data centers. Accordingly, Renesas' current analog products for data centers can be provided for wireless infrastructure as well.

In the 5G infrastructure field, we also offer industry-leading solutions for the evolving 5G / Fixed Wireless Access (FWA) sector in both sub 6GHz and mmWave systems with a complete portfolio of RF and RF Timing solutions. Our breadth of 5G solutions uniquely positions us to accelerate our customers' time-to-market and optimize the performance, power consumption and size of their systems. We also offer a variety of mmWave, RF and other timing products for satellite communications and other beamform products.

Automotive Business

Our Automotive Business segment includes automotive control, comprising semiconductor devices for controlling automobile engines, braking systems, chassis and safety, bodies, and ADAS/Cockpit, comprising semiconductor devices used in autonomous driving systems and automotive infotainment systems such as IVI systems, navigation systems and instrument clusters. Our customers in this unit include numerous domestic Japanese and global Tier 1 suppliers, with our solutions incorporated into products used by OEMs across the globe. See "—Customers, Sales and Marketing" for a description of our customers. We have also entered into strategic partnerships with Great Wall Motor Company Limited of China and Mahindra & Mahindra, Ltd. of India to develop solutions for and expand the development and manufacturing of electric and autonomous-driving vehicles in China, India and other developing regions. Our autonomous-driving vehicle solution has also been selected for use in Toyota's autonomous vehicles, and our R-Car SoC was adopted by other leading car makers.

We are also leading the transition to next-generation electronic vehicles and believe that next-generation car platforms will enable SoC growth via both scalability and flexibility. Our comprehensive product portfolio enables co-development with OEM & Tier 1 suppliers from the vehicle concept phase. We believe that connected gateways and domain layers will also play a key role for the next generation of automotive solutions.

Automotive Control Subsegment

Our automotive control subsegment offers semiconductors and system solutions for powertrain, xEVs, body, and safety and chassis end uses. Our automotive control subsegment consists of approximately 61% MCU products, approximately 3% SoC products, approximately 14% analog products and approximately 22% power products, according to our internal management accounting data for the fiscal year ended December 31, 2020.

Our principal automotive control products include:

- semiconductors for powertrain applications, such as MCUs from our RH850 Family and bipolar CMOS DMOS, or BiC-DMOS, analog devices;
- semiconductors for xEVs, such as MCUs from our RH850 Family, IGBT, MOSFET, Battery Management IC, and other analog devices;
- semiconductors for vehicle body systems, which include MCUs from our RH850 and RL78 Families; and
- semiconductors for chassis and safety management, which include MCUs from our RH850 Family.

Many of our automotive products feature solutions from our RH850 Family of micro-controllers. The RH850 Family offers high performance and functional safety with embedded security features, balanced with low power consumption and cost effectiveness. The RH850 Family is offered on an industry-first 40 nm process, and due to its versatility is featured in a wide range of automotive applications, such as: HEV/EV (RH850/C1x), instrument cluster (RH850/D1x), powertrain (RH850/E1x), vehicle body (RH850/F1x) and chassis & safety (RH850/P1x). We are the first major semiconductor manufacturer to utilize a mass production 40 nm process, giving us an advantage over our competitors who have not yet been able to achieve the lower heat generation, smaller footprint and higher circuit complexity that are achievable by utilizing the 40 nm process. In addition, our acquisition of Intersil in 2017 and the integration of their power management and precision analog technologies to our existing line-up provide us with an expanded suite of comprehensive solutions, including our R-Car SoC (heads-up display, camera network, and display network applications) and RH850 (xEV battery management applications). In March 2018, we announced the sample shipments of our RH850/E2x products, which incorporate the industry's first on-chip flash memory MCU using a 28 nm process technology.

In addition, we also provide a broad portfolio of resistive and capacitive sensor signal conditioners (SSCs) that help support our customers in building their sensor solutions. These integrated, high precision, reliable and robust signal conditioning circuits for sensors can operate in a variety of demanding industrial, automotive, and consumer environments with long-term stability. Our automotive sensor signal conditioning (SSC) ICs are also optimized to withstand harsh automotive environments that require low supply current to reduce power consumption (critical for PHEV, BEV and FCEV vehicles), and provide excellent electromagnetic compatibility and electrostatic discharge (ESD) protection.

Powertrain. As emissions and fuel economy requirements become stricter, demand has grown for more precise control in powertrain systems. The trend toward industry standardization and the incorporation of cooperative control, as well as the increasingly bifurcated demands of environmental technology, on the one hand, and emerging applications, on the other, are increasing the performance requirements for MCUs.

We provide leading edge technology for demanding powertrain and transmission control requirements, including solutions that target CO2 emission reduction and fuel economy improvement. The RH850/E1M-S2 series is the latest release in our line-up of powertrain MCUs, delivering improved performance over our prior model, while responding to an increase in the number of sensors and volume of communication that requires more computational power and higher precision. This series also includes network functionality and security to protect vehicle control systems from interference. These MCUs, combined with a line-up of power management ICs, peripheral ICs, power MOSFETs (metal-oxide-semiconductor field-effect transistors), Controller Area Network, or CAN, transceivers, and other devices, enable us to offer comprehensive product solutions.

We are the world's first producer of automotive 90 nm BiC-DMOS analog solutions, which integrate three different processes into a single chip, drastically reducing ECU space and allowing for highly precise measurement of analog signal and control. This solution is especially suited for vehicle fuel injection and electronic power steering applications. Typical automotive analog and power discrete currently require the use of external memory in order to store device settings, which requires the use of a separate chip. Our new technology will allow us to manufacture analog and power discrete that integrate both MCU and flash memory functions, reducing the total number of ECUs required per application and further miniaturizing our ECU footprint, while improving performance, reliability and energy consumption.

xEV. HEVs and EVs are growing in popularity amid calls to reduce vehicle CO2 emissions to slow global warming. HEVs are powered by a system that combines a conventional internal combustion engine and an electric motor, and have higher semiconductor content per vehicle compared to traditional automobiles. Both HEV and EV systems consume a large amount of electricity when running on electric motors. They therefore carry special high-voltage batteries with outputs of several hundred volts, designed specifically for xEVs and unlike the batteries found in conventional vehicles that are powered by internal combustion engines. These xEV batteries are equipped with voltage detection and charging control functions.

We offer kit solutions comprising MCUs, power discrete (including insulated-gate bipolar transistors, or IGBTs, and power metal-oxide semiconductor field-effect transistors, or MOSFETs), etc., for implementing the new technologies, including motor generator systems, battery control systems, battery charger and DC/DC control systems, that are or will be used in xEV systems. By combining Intersil's battery management ICs, or BMICs, with our RH850 ICs, we have been able to develop optimal battery management solutions for xEVs. We intend to selectively pursue business in the category of power management solutions, while focusing our sales efforts on more profitable general purpose MCU and analog devices.

Body. Body systems are making ever more extensive use of electronics to provide enhanced vehicle comfort and safety. Examples include power windows, automatic air conditioning, systems for controlling the seat position to support the driver, headlight illumination control linked to the steering angle and anti-theft systems. Support for integration and reuse across systems are needed in order to meet these diverse and varied requirements.

For example, the line-up of microcontroller abstraction layers for our automotive MCUs satisfying the latest AUTomotive Open System ARchitecture, or AUTOSAR, standard is being expanded, including the RH850 and RL78 Families. Use of the AUTOSAR standard enables development work spanning different vehicle body types and models. This allows increased system stability, better quality and reduced cost through economies of scale. In addition, the recent popularity of xEVs is increasing demand for lighter weight and reduced dark-current noise in body systems, due to their direct connection with battery performance.

We respond to these requirements by providing kit solutions for optimal body control combining MCUs, analog devices and power discrete, among others.

Chassis & Safety. As the use of electronic control and electrically powered functions in vehicles continues to grow, there is demand for a high level of safety and environmental friendliness in chassis and safety systems, which deal with operations related to steering and braking. Going forward, automotive systems will be expected to comply with the ISO 26262 functional safety standard for vehicles. The function and performance of MCUs is spurring demand for safety mechanisms such as redundant cores, powerful processing capabilities, the ability to communicate with peripheral devices, high-precision analog-to-digital converters and low power consumption.

We satisfy this demand and support automakers that are building safer vehicles by providing optimized solutions based on an extensive line-up of MCUs and analog and power discrete ranging from low to high end. We offer products optimized for power steering equipped with motor control timers, achieving Automotive Safety Integrity Level, or ASIL, compliant MCU solutions, such as with our RH850/P1x Series.

ADAS/Cockpit Subsegment

Our ADAS/Cockpit subsegment offers semiconductors and system solutions for ADAS + automotive infotainment & instruments applications. Our ADAS/Cockpit subsegment consists of approximately 52% MCU products, approximately 41% SoC products, approximately 6% analog products and approximately 1% power products, according to our internal management accounting data for the fiscal year ended December 31, 2020.

Our principal ADAS/Cockpit products include:

- semiconductors and applications for ADAS + automotive infotainment & instruments, such as our R-Car H series; and

- semiconductors and applications for ADAS, such as our R-Car V3U, V3H, W2R SoC platform.

ADAS + Automotive Infotainment & Instruments. We offer an extensive line-up of products to enable the implementation of a broad range of solutions for low-end to high-end car information systems. The many on-chip peripheral functions available provide great flexibility when implementing in-vehicle information terminals and include 2-D and 3-D graphics functions, audio and video processing functions and image recognition processing functions. We are also a leading player for semiconductor devices that control dashboards. We also provide solutions in the car navigation, car audio and connectivity fields. In addition, our acquisition of IDT and the integration of their automotive timing technology, in combination with our R-Car processor solutions, will allow us to provide a broader range of automotive infotainment applications.

Our R-Car family of solutions consists of a high-performance line-up of SoCs for car information systems, which currently use 28 nm and 16nm processes and are among the highest quality products in the industry. R-Car is a platform that we developed initially for use in car navigation systems, and that has since evolved parallel to the evolution of these and other automotive information systems. R-Car H3 and R-Car M3 are our third-generation R-Car chips, which utilize a 16 nm process and are capable of delivering computing performance sufficient to handle the rigorous requirements of autonomous vehicle computing platforms, including ADAS, full HD/4K heads-up displays, augmented reality and obstacle detection. R-Car comprises a series of SoCs for ADAS + automotive infotainment & instruments use, as well as several series of specialized SoCs for camera, surround view and "vehicle-to-everything" communication applications. The former's chip architecture features parallel processing of large-scale uniform data by the GPGPU and complicated and advanced data processing by the CPU, while non-uniform data is processed in parallel by our multiple proprietary IMage Processer, or IMP, cores and hi-speed vector processing and post-processing chips, allowing it to deliver performance superior to SoCs lacking such architecture. Since our acquisition of Intersil in 2017, we have supplemented our R-Car chips with Intersil's digital video signal processor and analog HD link components to offer comprehensive video network solutions for camera monitor and in-vehicle display systems.

We have also formed a consortium with more than 253 business partners, called the R-Car Consortium, to promote the development of software for car information system, or CIS, solutions. The R-Car Consortium facilitates collaboration between its members, which include designers, engineers, consultants and vendors encompassing areas such as operating systems, software development tools, middleware and manufacturing, leading to shortened development lead times, enhanced product support and the implementation of next-generation CIS solutions. By founding the consortium and encouraging members to join and collaborate, and by providing development support to partners using our R-Car platform, we have created and can continue to enhance our position as leader in the development of CIS products.

ADAS. Our R-Car platform is capable of delivering powerful sensing and cognitive processes that are integral to comprehensive ADAS solutions. ADAS are systems developed to assist, complement and eventually substitute for the driver in the complex process of controlling a vehicle. ADAS provide features including adaptive cruise control, blind-spot monitoring, lane-departure warning, night vision, lane-keeping assist and collision warning systems with automatic steering and braking intervention. Predictive ADAS are designed to prevent accidents by taking partial control of the vehicle's movement. These automated safety systems are seen as paving the way for fully autonomous vehicles.

ADAS have used front cameras to provide technologies such as lane departure warning, detection of pedestrians/vehicles running ahead (or forward collision warning), and high beam assistance. However, with systems for driver visibility, recent ADAS have expanded their functionality to include systems facing every direction around a vehicle by combining oversight prevention and other functions that utilize image recognition technology. This includes the addition of cameras, supplemented by Radar and Light Detection and Ranging (LiDAR) devices, to provide additional sensor information. This increased volume of sensor input is managed by sensor fusion systems, and is analyzed by cognitive processes that determine which information to communicate to the driver and which may, in some instances, take control of the vehicle. R-Car's powerful architecture, described above, is designed to handle the increased data volume and processor demands imposed by the development of ADAS features.

The sophisticated systems demand substantially higher processing performance in order to handle the expanded range of image recognition targets and increased processing load imposed by multiple cameras with higher pixel counts. Simultaneously, ADAS are required to fulfill functional safety to maintain high quality and performance and to reduce power consumption. Also, the rapidly increasing cost of software development has created a need for better development efficiency. To meet these increasing requirements, we have developed our RH850/V1x solution and the R-Car V3H device, which contributes to the realization of smarter and safer automobiles by integrating our innovative image recognition technology and essential functionalities required for ADAS on a single chip. To meet the typical requirements of surround view, radar and fusion applications, we provide ASIL Level D capable single-chip solutions or smart SoC designs supported by leading edge image recognition engines and high-performance architecture.

Vehicles in the autonomous driving era will be required to sense the environment, control the vehicle, and conduct synchronized communications with the cloud. A wide range of technologies is necessary to realize these functions and each technology needs to maintain high reliability to synchronize without any flaws. At the same time, these technologies are continuously advancing, which is why there is a growing demand for a total end-to-end solution. To address these needs, in April 2017 Renesas launched the new Renesas autonomy™ platform. Renesas autonomy is an open, innovative and trusted platform for ADAS and automated driving, consisting of Renesas' sustainable and scalable SoC and MCU roadmaps. Renesas is the only automotive semiconductor supplier in the industry to cover end-to-end solutions from secure cloud connectivity and sensing to vehicle control. Renesas' groundbreaking platform further extends its commitment to ADAS and automated driving. The platform also gives system manufacturers access to Renesas' expanding ecosystem of partners for ADAS and automated driving technologies, thereby improving development efficiency and speeding their time to market.

Integration of these highly complex setups in the automated vehicle's system requires the ability to design a modular solution that scales across different vehicles and that always meets embedded constraints in terms of performance, low power, safety and security. We believe that our R-Car Gen3 SoC family provides a scalable and reusable platform ideal for dealing with such constraints. Thanks to this family approach, software development from one device can be re-used on another device to scale performance and power consumption. This helps manage the complexity of multiple ECU requirements for Tier 1 suppliers, for example by tailoring their platform according to OEM requirements. The R-Car Gen3 family is a complete and scalable line-up of automotive SoCs based on TSMC's cutting edge 16nm finFET process. In addition to power consumption performance, this silicon process offers high performance due to higher clock speed.

As an example of our strength in cloud solutions, we have adopted AWS cloud service and Greengrass for our Connected Car Software Development Tools, which empower Renesas R-Car Safety & Security. These software development tools have been validated by both AWS Greengrass and AWS IoT core and have been tested to run on Renesas' R-Car Starter Kit under Automotive Grade Linux environment. This enables out-of-the-box development of innovative applications instead of the traditional approach of simply connecting the vehicle to the cloud, making cloud services available in the vehicle.

Other

Other sales include non-semiconductor products sold on a resale basis by our sales subsidiaries and development and outsourcing of production conducted by our design and manufacturing subsidiaries.

Research and Development

As the cornerstone of our growth strategy, we actively invest in R&D to strengthen current businesses and make advancements in technological innovation. Our research and development expenses for the fiscal years ended December 31, 2019 and 2020 were ¥134.8 billion and ¥135.1 billion, respectively, and represented 18.8% and 18.9% of revenue for the same respective periods. Our research and development expenses include capitalized research and development expenses recorded as intangible assets.

In addition, common cross-divisional technologies, such as device and process technologies, packaging technologies, and design platforms and test methods, are handled by both our Automotive Business and Industry/Infrastructure/IoT Business segments in cooperation with our production division. In addition, we use not only our own resources for research and development but also utilize external resources as necessary, such as participating in research with consortiums and other external research institutes, and partnering with third parties to provide optimal support for a wide range of fields and customers.

In a smart society, numerous products, ranging from home appliances to automobiles, are connected to networks, exchanging information with each other and providing a variety of services. As a result, we believe it will be necessary to take advantage of and organically link and coordinate the computing functions of digital products, such as MCUs and SoCs, the sensing functions of analog products, which can be seen as equivalent to the human eyes, ears, and nose, and the actuator functions of power products, which are equivalent to motors.

We are expanding our product portfolio and research and development activities to support a wide range of functions from sensing to actuators, and are strengthening solutions that combine analog and digital products, that we call our "Winning Combinations," as well as developing intellectual property, operating systems and other software that can be used for both types of applications. As a result of this, we believe that we will be able to achieve growth in the above areas.

Our recent research and development activities are described in more detail below:

Arm Cortex-Based MCU Family with RA4M3 MCU Group for Industrial and IoT Applications

In December 2020, we expanded our RA4 Series of microcontrollers (MCUs) with the new 32-bit RA4M3 Group of MCUs. We believe that the RA4M3 Group offers a well-balanced combination of performance and power consumption with the same advanced security and safety and makes it easy for our customers to develop safe and secure IoT edge devices for low-power applications, such as security, metering, industrial, and HVAC applications. In addition, customers can take full advantage of the flexibility for memory expansion options that are typical for a broad range of industrial and IoT applications that require continuous innovation.

The RA4M3 Group is designed for low-power IoT applications that require a balance of high performance, strong security, and higher memory. The RA4M3 MCUs combine TrustZone technology with Renesas' enhanced Secure Crypto Engine, enabling customers to realize secure element functionality in a wide variety of IoT designs. The Secure Crypto Engine incorporates multiple symmetric and asymmetric cryptography accelerators, advanced key management, security lifecycle management, power analysis resistance, and tamper detection.

64-Bit RZ/G2L Group of MPUs with Latest Arm Cortex-A55

In January 2021, we expanded our RZ/G2 general-purpose 64-bit microprocessors (MPUs), delivering improved AI processing for a wide range of applications. The expanded product lineup includes three new entry-level MPU models built around the latest Arm Cortex-A55 core: The RZ/G2L, RZ/G2LC, and RZ/G2UL. Together with the existing mid- to high-end RZ/G2E, RZ/G2N, RZ/G2M, and RZ/G2H MPUs, these seven RZ/G2 MPUs provide scalability from entry-level to high-end design.

The new RZ/G2L MPUs are built around the Cortex-A55 CPU core, which delivers improved processing performance and faster essential processing for AI applications compared with the previous Cortex-A53 core s. In addition, the new MPUs integrate camera input interfaces, a 3D graphics engine, and a video codec, providing cost-efficient support for sophisticated functionality for human-machine interface (HMI) applications, such as multimedia processing, GUI rendering, and AI image processing. The MPUs also feature the Cortex-M33 core, which makes it possible to perform real-time processing for tasks such as sensor data collection without the need for external microcontrollers (MCUs), reducing the overall system cost.

2nd Generation Digital Multiphase Controllers and Smart Power Stages for IoT Infrastructure Systems

In October 2020, we announced our 2nd generation of new digital multiphase controllers and smart power stages that support a variety of digital computing loads for advanced CPUs, GPUs and artificial intelligence (AI) ASICs addressing IoT infrastructure systems. Our ISL6822x, ISL6823x, RAA2282xx digital multiphase controllers and ISL993xx, RAA2213xx smart power stages expand our industry-leading digital multiphase platform to 41 devices. These solutions outpace the rapidly increasing power densities in data center servers, storage, optical transport, routers, switches, as well as computing and 5G wireless infrastructure equipment.

DDR5 Data Buffer for High-Performance Server and Cloud Service Applications

In September 2020, we announced a new high-speed, low-power DDR5 data buffer for data center, server, and high-performance workstation applications. Advancements over the past few years in real-time analytics, machine learning, HPC, AI, and other memory and bandwidth-hungry applications have fueled explosive growth in server memory bandwidth requirements. We believe that our new JEDEC-compliant DDR5 data buffer 5DB0148 enables significantly higher speeds and lower latency for load-reduced dual inline memory modules (LRDIMMs) that have become the cornerstone memory technology for this new class of applications.

RF Amplifier for 4G/5G Infrastructure Systems

In August 2020, we strengthened our RF Amplifiers portfolio with our new F1490 product, which delivers much lower quiescent current (75 mA) than competitive solutions. The F1490 is a second-generation high-gain, 2-stage RF amplifier that covers the key sub-6 GHz 5G frequency bands from 1.8 GHz to 5.0 GHz. The F1490 benefits designers with simplified product selection for their transmitter (Tx) line-up, elimination of a gain block with better margin, two selectable gain modes for system design flexibility, lower power consumption, and superior performance. This is one example of our continued LTE and 5G innovations with our RF amplifier solutions for AAS, 4G/5G base stations, and other wireless communications equipment.

R-Car V3U SoC for ADAS and Automated Driving

In December 2020, we unveiled our latest R-Car product, the R-Car V3U, which is an ASIL D SoC for ADAS and automated driving systems. Delivering 60 TOPS with low power consumption for deep learning processing and up to 96,000 DMIPS, the R-Car V3U is built for the latest performance, safety, and scalability demands of ADAS and AD architectures utilized in next-generation autonomous vehicles.

The new R-Car V3U is our first SoC using the R-Car Gen 4 architecture within the open and flexible Renesas autonomy platform for ADAS and AD. The R-Car V3U leverages assets developed on previous-generation devices, such as ADAS and Level 2 perception stack with the R-Car V3M and R-Car V3H, along with the Renesas autonomy platform, to offer a smooth migration path to single-chip Level 3 automated driving with short development turnaround and safe production launch.

Automated driving systems require functional safety up to ASIL D, which is the most stringent automotive safety integrity level specified under the ISO 26262 standard for road vehicles. The newest R-Car V3U SoC integrates multiple sophisticated safety mechanisms that provide high coverage with fast detection and response for random hardware faults, and is expected to achieve ASIL D metrics for the majority of the SoC processing chain, as well as reducing design complexity, time to market, and system cost.

The R-Car V3U delivers highly flexible DNN (Deep Neural Network) and AI machine learning functions. Its flexible architecture is capable of handling any state-of-the-art neural networks for automotive obstacle detection and classification tasks while maintaining 60 TOPS with low power consumption and an air cooling system. The R-Car V3U also offers a wide range of programmable engines, including DSP for radar processing, multi-threading computer vision engine for traditional computer vision algorithms, image signal processing to enhance image quality, and additional hardware accelerators for key algorithms such as dense optical flow, stereo disparity, and object classification.

Renesas has developed an open and integrated development environment that enables customers to take advantage of the R-Car platform's built-in hardware benefits, as well as low power consumption and deterministic real-time software to enable fast time to market for computer vision and deep learning-based solutions.

Inductive Position Sensing IC IPS2200 for Industrial Motor Commutation

In June 2020, we introduced the magnet-free IPS2200 inductive position sensor. Featuring high accuracy and speed, total stray field immunity, and efficient motor integration in a thin and lightweight form factor, the IPS2200 is suitable for use as an absolute position sensor in a wide range of industrial, medical, and robot applications. The IPS2200 is designed around the motor, allowing customers to match the number of sectors to pole pairs of the motor to maximize accuracy, accommodating both off-axis (through shaft and side shaft) and on-axis positioning. The magnet-free IPS2200 is up to 10x thinner and up to 100x lighter with up to 250 krpm electrical speeds compared with traditional resolvers. The sensor's thin and light form factor and total stray field immunity enables easier motor integration and provides the standard materials required for customers to manufacture their own resolver replacement that helps in reducing bill of materials costs. The IPS2200 provides up to 10x faster speeds and very low latency compared with resolver- or magnetic-based solutions.

The sensor allows our customers to cost effectively tailor sensor design for their applications and maximize the performance of the sensor's accuracy. Moving forward, we also plan on exploring the inductive sensors for use in automotive applications.

Jointly-Developed Open Camera Platform—EagleCAM

In February 2021, Renesas and LUPA-Electronics GmbH ("LUPA"), an automotive safety solution provider, announced the EagleCAM module, an open front camera solution, that features Renesas' R-Car V3H and R-Car V3M system-on-chip (SoC) devices. The EagleCAM is an all-in-one scalable camera platform that targets the latest Euro NCAP and C-NCAP requirements, such as automatic emergency braking, forward collision warning, lane keeping assist, and traffic sign recognition. These jointly-developed solutions enables OEMs and Tier 1 suppliers to differentiate and extend their product offerings by integrating their proprietary or third-party software that adds additional driving features. Most smart camera turnkey solutions on the market today take a black box solution approach, making it challenging for OEMs and Tier 1 suppliers to address changing market demands and slowing down development. With EagleCAM featuring R-Car SoCs, we and LUPA have introduced an open turnkey solution that delivers flexible, high-performance perception while shortening time to market and reducing the bill of materials (BOM) costs. We believe that the combination of LUPA's EagleCAM and Renesas R-Car SoCs delivers scalable and functional safety-compliant, open ADAS solutions that enables flexible feature integration, allowing customers to achieve quicker time to production.

Complete Power and Functional Safety Solution for R-Car V3H ADAS Camera Systems

In March 2021, we announced a new power and functional safety solution for systems based on the R-Car V3H system-on-chip (SoC) for advanced driver assistance systems (ADAS) automotive front cameras and driver monitor cameras. This new solution includes the RAA271050, which is a 42V synchronous buck 'pre-regulator' that accepts the vehicle's 12V supply and steps it down to an intermediate supply voltage. The RAA271000, a seven-channel PMIC (power management IC), then takes the RAA271050's output and steps it down further to the various supply voltages needed by R-Car V3H and its peripherals. Both devices were developed per the ISO-26262 standard, and can support system safety requirements up to ASIL D. The solution satisfies all the power and functional safety requirements for the R-Car V3H. It provides supply voltages with the current capability to meet all power specifications, including sequence, voltage accuracy, and load step response and provides all the necessary power and digital monitoring functions for safety.

In addition, this new solution is more efficient, with less power loss reductions compared to competitive PMICs under comparable operating conditions. This lower power loss enables operation at higher temperatures, reducing cooling costs and delivering better reliability. We believe that this new power and functional safety solution showcases our power design expertise to offer R-Car V3H customers significant cost savings that also enables designers to implement the latest in ADAS camera applications quickly and efficiently.

Manufacturing and Facilities

Manufacturing

Our and our subsidiaries' semiconductor manufacturing operations are broadly divided into two processes: "front-end," which involves the manufacture of wafers; and "back-end," which involves assembly and testing of semiconductors. Our front-end processes are further divided by wafer size and process, among other factors.

Front-end processes take place at highly complex wafer manufacturing facilities and involve the imprinting of substrate silicon wafers with the precise circuitry required for semiconductors to function. The front-end production cycle requires high levels of precision. Back-end processes involve the assembly, test and packaging of semiconductors in a form suitable for distribution. Back-end processing is generally less complicated than the highly complex front-end process so we tend to determine the location of our back-end facilities by considering cost factors in priority over technical considerations.

Our basic policy with regard to manufacturing is to maintain and further strengthen our development of manufacturing technology relating to our strengths of quality and energy efficiency. By developing a flexible production system that can adapt to market change and increase our manufacturing efficiency, we believe we will be able to deliver products with cost performance that our customers will appreciate.

In accordance with our basic policy of strengthening and maintaining development of cutting-edge technology, we currently outsource wafer manufacturing mainly for 40nm of MCUs and 28nm and finer processes of System LSIs and a portion of other products. We outsource such manufacturing to TSMC and other manufacturers to increase our manufacturing efficiency and maintain a production system that is flexible with regard to market changes. In addition, we are endeavoring to make our production structure more efficient and reduce costs, which we may carry out by restructuring our less efficient facilities.

At our back-end facilities, we focus on products for use in the automotive and industrial sectors that require high reliability. For other products, our priority is on manufacturing efficiency. Consequently, we have shifted such manufacturing overseas and also outsource it to J-Devices Corporation, Amkor Technology, Inc., Advanced Semiconductor Engineering, Inc. and other manufacturers both inside and outside of Japan.

Facilities

Our principal manufacturing facilities are located in Japan, China and Malaysia and comprised a total of approximately 910,000 square meters as of December 31, 2020.

The following table sets forth certain information with respect to our manufacturing facilities as of December 31, 2020:

Facility location	Principal products	Floor space (Square Meters)
Front-end		
Hitachinaka, Ibaraki Prefecture, Japan(1)	MCUs, SoCs, analog ICs	156,168
Kawashiri, Kumamoto Prefecture, Japan	MCUs, SoCs, power discrete	133,795
Saijo, Ehime Prefecture, Japan	MCUs, analog ICs	110,574
Otsu, Shiga Prefecture, Japan(2)	MCUs, power discrete, compound devices	85,192
Ube, Yamaguchi Prefecture, Japan(2)	MCUs, ASICs	54,314
Takasaki, Gunma Prefecture, Japan	Power discrete	80,782
Palm Bay, Florida, United States	Analog ICs	49,424
Back-end		
Yonezawa, Yamagata Prefecture, Japan	MCUs, SoCs	26,200
Nakatsu, Oita Prefecture, Japan	MCUs, SoCs	21,990
Nishiki, Kumamoto Prefecture, Japan	MCUs, SoCs, ASICs	15,923
Beijing, China	MCUs, analog ICs	97,924
Suzhou, China	MCUs	16,296(3)
Penang, Malaysia	Analog ICs, power discrete	20,696
Selangor, Malaysia	MCUs, SoCs, analog ICs, power discrete	40,358

Notes:

(1) In March 2021, a fire occurred at our Naka plant. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Factors Affecting Results of Operations—March 2021 Fire at our Naka Plant."

(2) In June 2018, we announced the planned closure and consolidation of our factory in Yamaguchi, Japan and a portion of our factory in Shiga, Japan, which we had planned to be completed in approximately two to three years. In May 2020, we also announced that we intended to withdraw from the laser diode (LD) and photo diode/detector (PD) businesses and to close all of the production lines at our Shiga factory as soon as practicable. The planned closures of both factories remain in process and has not yet been completed as of the date of this offering circular.

(3) Building area.

Our Suppliers and Supply Chain

We purchase a wide variety of raw materials, parts and components from numerous suppliers inside and outside Japan. We source our requirements for component materials for our products, such as silicon wafers, circuit boards, wire and various chemicals and gases, from various suppliers throughout the world. We obtain these materials and equipment from a large number of suppliers located throughout the world. We regularly conduct investigations of the business conditions of our suppliers. Renesas Electronics America Inc. primarily relies on its foundry partners, which include GlobalFoundries Inc., TSMC and United Microelectronics Corporation, for sourcing silicon wafers to be used in manufacturing the ICs such partners supply. Dialog primarily relies on TSMC for its silicon wafers, metals and certain chemicals and gases which TSMC uses to fabricate its products. See "Proposed Acquisition of Dialog."

We procure a wide range of materials and services at competitive rates from markets around the world that meet our quality requirements and delivery schedules. We strive to follow fair business practices while abiding by all applicable laws and regulations. Our goals are to ensure that our procurement activities add value to our business, as well as the businesses of our customers and suppliers, by following these guidelines:

Provision of equal, competitive opportunities. Information relating to procurement is provided in an appropriate and timely fashion so as to provide equal, competitive opportunities to all potential suppliers, both domestic and overseas, who express an interest in working with us.

Evaluation and selection of suppliers in fair manner. We follow a comprehensive supplier evaluation and selection process that places the highest emphasis on corporate social responsibility and business continuity management, in addition to the reliability of the prospective supplier's management, commercial and quality standards, delivery schedules and the advanced technical features of the products to be procured.

Development of mutual trust. We believe that close communication with our suppliers is extremely important for the development of mutual trust, which will become the foundation for building long-term, mutually beneficial business relationships.

Management and protection of information. We recognize the value of the information that we learn through our materials-related transactions, and manage it accordingly.

Sustainability and continuity of business. We create an effective business continuity management system for our entire supply chain due to recognizing the importance of being able to maintain the continuity of our business.

Quality management. We purchase from suppliers with quality management systems capable of meeting our specifications with "zero defects."

Customers, Sales and Marketing

Our major customers include many of the leading manufacturers of automotive Tier 1, automotive electronics, consumer electronics and other leading global companies. We have a worldwide sales network with sales capacity in Japan and have subsidiaries focused on sales that are based in North America, Europe, China, Taiwan, Singapore, Malaysia, India and South Korea. We rely on these foreign subsidiaries with regard to sales in South America and Africa, two regions that we believe show promise.

Our key customers, including end customers, for each of our two reporting segments are as follows:

- *Industrial/Infrastructure/IoT Business*: Samsung Electronics, SK hynix Inc., Midea, Daikin, Siemens AG, Mitsubishi Electric Corporation, Canon Inc., Seiko Epson Corporation, LG Corporation, Cisco Systems, Inc., ZTE Corporation, Telefonaktiebolaget LM Ericsson and Nokia Corporation.

- *Automotive Business*: DENSO Corporation, Continental AG, Robert Bosch GmbH, Panasonic Corporation, Mitsubishi Electric Corporation, Hitachi, Ltd., Toyota Motor Corporation, Honda Motor Company, Ltd., Nissan Motor Company, Ltd., Audi AG, BMW, Daimler AG, Volkswagen AG and General Motors Corporation.

We generally sell our products through distributors, such as Ryosan Company, Limited, except in the United States and Europe, where we generally sell most of our products directly to our customers. Unless otherwise noted, references to our "customers" in this offering circular, in relation to products sold through these distributors, include the semiconductor device manufacturers to which such distributors resell the products.

Many of our products are developed through design-in processes that allows us to communicate with our customers and end-product manufacturers to ascertain their individual product specification requirements, general technological and manufacturing requirements and market trends. In addition to strengthening our relationships with our design-in customers, this allows us to plan the research and development of new products and propose new products to our customers before they begin actively sourcing suppliers, giving us an advantage during the competitive sourcing stage.

To flexibly respond to emerging demand, we have also continued to strengthen and improve our e-business platform that underpins our internet-based sales. We are strengthening our infrastructure and product lineup so that customers can not only purchase hardware and download software from our website, but also conduct operation confirmation, each of which will assist our customers get their products to the market as quickly as possible.

Competition

The semiconductor industry is highly competitive and is characterized by constant and rapid technological change, short product life cycles, significant price erosion and evolving standards. Our competitors range from large, international companies offering a full range of products to smaller companies specializing in particular markets within the semiconductor industry. The competitive environment is also changing as a result of increased alliances among our competitors and through strategic acquisitions, joint ventures and other alliances. Our competitors may have greater financial, personnel and other resources than we have in a particular market or overall. We expect competition in the markets in which we participate to continue to increase as existing competitors improve or expand their product offerings or as new participants enter our markets. Increased competition may result in reduced profitability and reduced market share. In addition, we could lose market share to new entrants, including those that had previously focused on products and areas other than those in which we compete, that are able to more quickly adapt to technological changes, such as the growing importance of IoT and the evolving technologies that form the core of ADAS + automotive infotainment & instruments solutions, despite our historical relationships with our customers.

Many of the markets in which we compete include established competitors with substantial experience and also present opportunities for growth within certain fields. Although product life cycles and the degree of complexity vary by sector, our primary competitors generally offer products that have similar breadth, depth and design complexity. The principal competitive factors are price, product quality, product supply capabilities, product line-up, technical service and customer relationships. We attribute our success to our 35-year history of providing products to the automobile sector, given our customers ample opportunity to be familiar with the function and quality of our products, our level of service, and our achievements and know how. Our competitors include NXP Semiconductors N.V., Infineon Technologies AG, STMicroelectronics N.V., ON Semiconductor Corporation, Texas Instruments Incorporated, Analog Devices, Inc., Nvidia, Qualcomm and Intel.

Environmental Standards and Government Regulation

Our operations in Japan are subject to environmental regulation under the Air Pollution Control Act, the Water Pollution Control Act, the Noise Regulation Act, the Vibration Regulation Act, the Waste Management and Public Cleansing Act, the Soil Contamination Countermeasures Act, the Act for Promotion of Effective Utilization of Resources, the Act Concerning the Promotion of the Measures to Cope with Global Warming and other laws of Japan. We are also subject to local regulations which in some cases impose requirements more stringent than the national requirements. Our manufacturing operations in the United States, Malaysia and China are subject to and affected by a variety of applicable environmental laws and regulations relating to the discharge, treatment, storage, disposal, investigation and remediation of certain materials, substances and wastes.

We continuously monitor our environmental compliance and, if necessary, adjust affected operations so that we are in substantial compliance with all requirements. When environmental problems are revealed during the monitoring process, we seek to take appropriate remedial measures.

Under the Soil Contamination Countermeasures Act of Japan, owners, administrators or occupiers of land on which facilities using designated harmful substances have operated are required to submit to investigations by government-designated inspectors of soil contamination levels and to report the results thereof to the local governor upon the termination of the operation of those facilities. In addition, the local governor may order the inspection of any land if the local governor finds that there is a concern that the land is contaminated by designated harmful substances in the case of certain changes to the form or nature of the land, or on which a threat of soil contamination which may be harmful to human health exists. If the local governor finds that the level of soil contamination in a given area of land due to hazardous or toxic substances exceeds the standards prescribed by the Ministry of the Environment and that area of land is polluted to such an extent that it has caused or may cause harm to human health, the local governor must designate the area as a polluted area of land. Following such designation, the local governor must instruct the current owner, administrator or occupier of such land to remove or remediate hazardous or toxic substances on or under the land in accordance with a plan for the removal and remediation, in principle, whether or not the current owner, administrator or occupier knew of, or was responsible for, the presence of such hazardous or toxic substances. A person that causes harmful soil contamination on land owned by others may be required to reimburse the owner, administrator or occupier for the cost of remediation. Under the law, substances such as trichloroethylene, which historically were not regulated for soil contamination, are currently subject to regulation. In the past, we have had a limited number of cases in which our properties had contamination from trichloroethylene and other chloroethylenes above the standards set forth in the regulation. In cooperation with local authorities and residents, we have since implemented ongoing remediation measures, which have not materially affected our operations. We believe that such remedial measures will continue to be immaterial to our operations.

The Soil Contamination Countermeasures Act and the Water Pollution Control Act of Japan regulate the amount of fluorine contamination permitted in soil and groundwater. We have in the past had a limited number of cases of contamination from fluorine and fluorine compounds above the standards set forth in the regulation. In such cases, we have implemented necessary remedial measures in cooperation with the relevant authorities, and such measures have not materially affected our results of operations. We believe that such remedial measures will continue to be immaterial to our operations.

In addition, the Kyoto Protocol, an international treaty aimed at curbing emissions of greenhouse gases, entered into force on February 16, 2005, seven years after it was adopted at a United Nations conference in Kyoto in 1997. During the first period under the Kyoto Protocol, from 2008 to 2012, signatory nations agreed to reduce their carbon dioxide and other greenhouse gas emissions by certain levels, including Japan, which agreed to meet the requirement by reducing its emissions by 6% from 1990 levels by 2012. In November 2016, Japan ratified the Paris Agreement, an international treaty aimed, similarly to the Kyoto Protocol, at addressing the mitigation of greenhouse gas emission. The Paris Agreement went into effect on November 4, 2016. In April 2021, Japan announced its plan to reduce greenhouse gas emissions by 46% from 2013 levels by the end of fiscal year 2030. Our primary climate change initiative is aiming to be carbon neutral by 2050. By 2030, we are aiming to reduce our greenhouse gas emissions by 60% from 2013 levels. See "—Environment, Social and Corporate Governance—Environment" below.

Although we have not been the subject of material environmental claims in the past and believe that our current activities conform to all presently applicable environmental regulations, other than as set forth above, failure to comply with present or future regulations could result in costly litigation, the assessment of damages or imposition of fines against us, suspension of production or a cessation of operations. Substantial financial reserves or additional compliance expenditures could be required in the future due to changes in existing regulations, promulgation of new legislation, new information regarding environmental conditions or other events, and those expenditures could adversely affect our business, financial condition and results of operations. See "Risk Factors—Risks Related to Our Business and Industry—Environmental laws and regulations may expose us to liability and increase our costs. Changes in these environmental laws and regulations as well as customer expectations for environmentally friendly products and manufacturing processes could negatively impact our business."

Some of the products that are manufactured by or on behalf of our U.S. subsidiary, Renesas Electronics America Inc. (which includes Intersil and IDT), have military or strategic applications and would either (1) appear on the USML, as set forth in the International Traffic in Arms Regulations, or ITAR, or (2) represent so-called "dual use" items governed by the EAR. As a result, some of these products may require individual validated licenses in order to be exported to certain jurisdictions.

Intellectual Property

As of December 31, 2020, we owned a total of approximately 19,300 patents worldwide (including pending patents), comprising approximately 3,600 registered Japanese patents and approximately 15,700 registered foreign patents as of the same date, including those held by our subsidiaries.

We have certain licensing arrangements with other companies that are important to our product manufacturing.

Insurance

We maintain a range of insurance policies which we believe are comparable to those of other companies with similar operations, covering the value, or portion of the value, of buildings, plant and machinery, stocks and goods-in-transit and other coverage. We also maintain coverage for business interruption and product liability. Coverage of losses relating to political unrest or economic upheaval by these insurance policies is generally limited, and losses relating to terroristic acts are not covered.

Environment, Social and Corporate Governance

We are committed to sustainable development and we want to build a sustainable future where technology helps make our lives easier. We believe that sustainability is at the heart of what we do. Our products and solutions are contributing to the long-term sustainability of society. We create value by providing innovative and differentiated energy-efficient products that help our customers build systems with very high power efficiency. This means reducing the carbon and environmental footprint of our business, while striving to deliver solutions that can make a positive impact on the world and communities around us.

In addition, we believe that making our future society safe and secure through sustainable products and solutions is at the heart of innovation. We provide a wealth of solutions to directly address the system-level safety and security concerns of our customers. With our safe and secure products and solutions, we want to build a future where our products and solutions help make lives easier and creates a better world for all of us.

Our functional safety and security technologies are designed to meet the industry's highest ISO/IEC standards for reliability and performance to help our customers achieve system-level functional safety and secure designs. To meet the industry's stringent industrial standards compliance, we offer dedicated functional safety and security product portfolios.

We have achieved recognition regard for our environmental, social and governance (ESG) initiatives around the world, such as by being selected as a member of the SNAM Sustainability Index, established by Sompo Japan Nipponkoa Asset Management Co., Ltd. (SNAM), for the first time in 2019. The SNAM Sustainability Index is managed with a long-term perspective for pension funds and institutional investors who invest broadly in companies with strong ESG ratings. Every year, approximately 300 stocks achieve an excellent ESG rating. We are also a member of the S&P/JPX Carbon Efficient Index, which focuses on overweighting companies that have a lower level of carbon emissions per unit of revenue.

Environment

In recent years, corporate environmental activities have come to span a wide range of areas, including pollution prevention, the reduction of greenhouse gas emissions and waste materials, regulations on chemical substances, and regulations on products containing hazardous substances. In accordance with our Environmental Policy and Action Guidelines, we promote the reduction of the environmental impact of our production activities and develop and sell environmentally-conscious products that improve our customers' environmental performance.

Our primary climate change initiative is aiming to be carbon neutral by 2050. By 2030, we are aiming to reduce our greenhouse gas emissions by 60% from 2013 levels. This will be realized by our pursuit of energy conservation and expanding the use of renewable energy, as well as through our efforts to reduce the emission of PFC gas, a greenhouse gas that heavily impacts the environment.

In April 2021, we also announced that we have become a member of the Japan Climate Initiative (JCI), a network that aims to realize a decarbonized society. We also announced our support for JCI's "Call for an Ambitious 2030 Target for Japan to Realize the Paris Agreement Goal," which was announced by the JCI on April 19, 2021. This message by the JCI urges the government of Japan to set a climate change goal that would cut greenhouse gas emissions in Japan by at least 45% below 2013 levels by 2030, and to strengthen its renewable energy target to 40% to 50% in 2030.

Our environmental policy is that we will contribute to creating harmony between society and the environment through the course of our business activities. We have five primary environmental action guidelines:

- We consider the environment in all stages of the product life cycle, including research & development, design, procurement, production, sales, logistics and use and disposal.

- We strive to prevent pollution and to minimize environmental impact. When environmental problems arise, we take appropriate steps to minimize the environmental impact and disclose ac-curate information.

- Our environmental management efforts involve compliance with all environmental laws, regulations and agreements, and we promote compliance activities.

- We disclose environmental information to stakeholders and encourage transparency with society to promote mutual understanding.

- We educate all employees in environmental conservation to create a company culture that improves the balance between the environment and our business activities.

We believe that the key topics regarding our environmental activities are compliance with laws and regulations, the reduction of our environmental impact, the development of eco-friendly products and the maintenance of good relations with our stakeholders.

We promote environmental management via a system called "Eco-Management Activities," with "eco-factory," "eco-product" and "eco-communication" initiatives as the three cornerstones of our environmental activities:

- *Eco-Factory Initiatives.* Initiatives to reduce the environmental impact at manufacturing sites by limiting greenhouse gas emissions and controlling chemical substances used in manufacturing.

- *Eco-Product Initiatives.* Initiatives to provide environmentally-conscious semiconductors throughout the product life cycle, such as the management of chemical substances contained in products and the development of products with low power consumption.

- *Eco-Communication Initiatives.* Initiatives to raise employee awareness with environmental education, and activities to publicly promote our environmental efforts.

In addition, our semiconductor products and solutions contribute to global environmental conservation activities, such as the prevention of global warming and effective use of resources, through energy saving and downsizing of customers' products and systems. On the other hand, it is also true that manufacturing consumes energy such as electricity and fuel, as well as resources such as chemical substances and water, and emits waste, effluents and emissions, which have a major impact on the environment.

As such, we strive to reduce our environmental footprint by having a detailed understanding of our input and output volumes from production through to logistics, and systematically reducing these inputs and outputs. Furthermore, we will continue to provide customers with eco-friendly products that are efficiently manufactured by effectively utilizing limited resources and energy. We also promote environmental activities by establishing environmental management systems at each site, including affiliated companies.

We conduct annual environmental audits at all of our sites to ensure continuous improvement of our environmental management system and performance. In 2019, environmental audits were conducted at 11 domestic sites, and 89 recommendations were made, including 30 requests for improvement. We implement reliable audits by using auditors qualified as environmental management system auditors certified under the Japanese Registration of Certified Auditors (JRCA). In addition, we have established a system to share information across all sites in response to the increasingly strict environmental laws and regulations, and we keep up to date with compliance systems and compliance status.

All of our domestic and overseas manufacturing sites have ISO14001 certification, an international standard for environmental management systems. We will continue to maintain the ISO14001 certification status effectively and efficiently.

Sustainable Development Goals

Sustainable Development Goals, or SDGs, were adopted by world leaders at the United Nations Sustainable Development Summit 2015. The SDGs are long-term goals common to the global society that should be achieved by 2030 to realize a sustainable world. The SDGs, which are set out as universal goals that do not leave anyone behind, comprise 17 goals and 169 targets. The SDGs call all nations including emerging and advanced countries to action. They also call for active involvement not only of large frameworks, such as the United Nations and states, but also of small frameworks, such as companies and NGOs.

The activities, investment, and innovation of private companies are the key to productive and inclusive economic development and job creation. The SDGs require companies to be actively involved in the cause and use their creativity and innovation in resolving issues related to sustainable development. Moreover, the SDGs that focus on sustainability assume that companies incorporate the approach of SDGs into their primary business activities.

We promote environmental activities that contribute to the achievement of 13 out of 17 SDGs. These contribution activities are not meant for social contribution, but are incorporated in the development, production, and sales of semiconductor products, that is, the company's core business. Thus, the company can contribute to the achievement of the SDGs by performing its primary business. Moreover, the company makes educational materials on SDGs available in the company so that all departments and employees can contribute to the achievement of the SDGs.

In addition, in April 2021, we became a signatory to the United Nations Global Compact (the "UNGC"), which is the world's largest voluntary initiative to implement universal sustainability principles. As a participating company, we will further align our sustainability strategy with the ten UNGC principles in the four areas of human rights, labor, environment and anti-corruption.

Social

Renesas respects all types of diversity and values, and actively works to improve our work environment and foster a corporate culture that accepts and is inclusive of one another. One of the strengths of Renesas as a global company is the active use of a workforce with diverse human resources and values, be it nationality, race, philosophy, culture, language, gender, and age, operating in over 20 countries around the world. We believe our commitment to diversity and inclusion, and our initiatives are the source of innovative products and services that support our sustainable business growth. We will maximize individual abilities by creating an environment in which our diverse workforce with different personalities and values can fully demonstrate their strengths, enhancing our development system so employees can thrive.

In our "Code of Conduct" we very clearly commit to respecting human rights and ensuring equality of treatment free from discrimination (in word or deed), on the basis of race, beliefs, creed, gender, age, social status, family origin, nationality, ethnicity, religion or disability, and to prohibiting sexual harassment, forced labor, and child labor in all aspects of our employment activities, including hiring, personnel training, and working conditions. We guarantee that this commitment is upheld by all our group companies conducting business throughout the world, that they strictly adhere to applicable local laws and regulations, and that they carry out human rights education and activities to raise awareness throughout our workforce.

In 2020, we joined the Global Semiconductor Alliance ("GSA"), whose goal is to build a global eco-system for the semiconductor industry. As part of our commitment, our CEO signed the GSA's Women's Leadership Initiative pledge to signify our full commitment to recruiting, retaining and helping advance the careers of women in the semiconductor industry. In addition, in April 2021, we pledged our support for and became a signatory of the United Nations Women's Empowerment Principles (WEPs), which is a joint initiative founded by the United Nations Global Compact (UNGC) and UN Women in 2010. Becoming a signatory to this initiative solidifies our unwavering commitment to promote gender equality and create a more inclusive workforce where individuals can achieve their maximum potential regardless of gender. Going forward, we will empower and inspire women in the workplace and in society, and to create a business environment where women can work, lead and excel in their careers. Moreover, our CEO has joined a leadership group as a part of the Gender Equality Bureau Cabinet Office that aims to accelerate gender equality and the advancement of women. We plan to accelerate our efforts to promote gender equality and women's activities while deepening our network with other leaders in various industries throughout Japan.

In addition, we have joined the Responsible Business Alliance (RBA), which is a nonprofit organization founded in 2004 committed to supporting the rights and well-being of workers and communities worldwide affected by global supply chains. By joining the RBA, we will fully support the vision and goals of the RBA to ensure that its manufacturing processes are environmentally responsible and that its workers are treated with respect and dignity.

Corporate Governance

To execute corporate governance and remain as a sustainable and responsible partner for our stakeholders, we are committed to maintaining a corporate governance structure that is transparent, enabling fair, fast and resolute decision-making and robust accountability. We do this by implementing our policies through our processes and systems, from supervision of our business operations to business executions. Our ultimate objective is to achieve sustainable enhancement of corporate value over the mid- to long-term for the benefit of all the stakeholders.

As required under the Companies Act in Japan, we have established an internal control system to ensure our corporate officers, and employees comply with the applicable laws, regulations and our articles of incorporation. In addition, we periodically hold Internal Control Promotion Committee to discuss our group's policies and the state of compliance with respect to internal control.

Our corporate governance policies and practices are outlined in our Corporate Governance Report, Corporate Governance Guidelines and Basic Policy on Establishment of Internal Control Systems.

We recognize the importance of operating business efficiently and ensuring the soundness and transparency of management in order to continuously increase corporate value. We are working to improve our management system and implement various measures to enhance corporate governance. In addition, to execute corporate governance, we regularly hold meetings of the Board of Directors, the Board of Corporate Auditors, and the Executive Committee and have established our Nomination Committee and Compensation Committee with a majority of independent members.

Legal Proceedings

As we conduct business worldwide, it is possible that we may become a party to lawsuits, investigation by regulatory authorities and other legal proceedings in various countries. Though it is difficult to predict the outcome of the legal proceedings to which we are presently a party or to which we may become a party in future, the resolution of such proceedings may require considerable time and expense, and it is possible that the results will have significant adverse effects on our business, performance, financial condition, cash flow, reputation and creditability. The most significant matters are described below.

Civil Lawsuit Related to Alleged Patent Infringement and Trade Secret Violation

Our subsidiary in the United States has been named as a defendant in a lawsuit related to alleged patent infringement and trade secret violation filed in November 2008 in the United States District Court for the Eastern District of Texas (hereafter "the Court of First Instance"). The Court of First Instance entered a final judgment in June 2016 against us in the amount of $77.3 million. However, our subsidiary immediately filed a notice of appeal at the Court of Appeals for the Federal Circuit (hereafter "the Court of Second Instance"). In July 2018, the Court of Second Instance rejected the judgement of the Court of First Instance for payment of compensation and ordered that the case be retried in the Court of First Instance.

Civil Lawsuit Related to Alleged Violations of Competition Law

We have been named in the United Kingdom as a defendant in civil lawsuits related to possible violations of competition law involving smartcard chips brought by purchasers of such products. There are two civil lawsuits in the United Kingdom. The first civil lawsuit was brought in July 2019 in the Senior Courts of England and Wales and is currently in progress. The other case was brought in September 2020 in the same court.

Indemnification Claim Related to Environmental Pollution

Our subsidiary in Taiwan may be subject to restitution for environmental pollution associated with a factory in Taiwan owned by the subsidiary's predecessor company.

Since June 2004, our subsidiary has been notified that another company reserved its right to seek indemnification from us for (1) all costs associated with the remediation of contamination related to environmental pollution found at a factory in Taiwan owned by the subsidiary's predecessor company, (2) the costs relating to those retained environmental liabilities in a toxic tort class action lawsuit filed by ex-employees who worked at the factory and (3) the costs associated with the lawsuit. Though our subsidiary is not a defendant in the class action lawsuit, the claimant initiated arbitration proceedings in December 2017 against us related to all claims arising out of the contamination, including the remediation, toxic tort claims and attorneys' fees, but afterward, the arbitration was ordered by the arbitrator on a unilateral request by the claimant.

Our Formation and History

Renesas Electronics was formed in April 2010 through the merger of NEC Electronics and Renesas Technology to further strengthen their leading positions as MCU suppliers and to integrate their complementary SoC businesses. NEC Electronics was established in November 2002, as a spin-off of NEC's semiconductor business, which started operations in 1956, and completed its initial public offering and TSE listing in 2003. NEC Electronics went on to provide semiconductors used in a range of sectors, especially the automotive, industrial and consumer electronics sectors, to customers worldwide. Renesas Technology was formed in April 2003 as a joint venture integrating the Hitachi and Mitsubishi Electric semiconductor units specializing in System LSI, of which Hitachi owned a 55% stake and Mitsubishi Electric owned the remaining stake. In subsequent years, Renesas Technology shifted its corporate focus beyond semiconductor design and manufacture to encompass software and other system solutions.

In 2012, to support our financial stability in response to a deterioration in operating conditions due to a series of severe, non-cyclical events and, more importantly, help position us for longer term growth, we determined to undertake a capital increase by way of third-party allotment of new shares of common stock. From among the offers we received from potential investors, we accepted a proposal from a consortium led by Innovation Network Corporation of Japan that we believe offered the best potential to help improve our corporate and shareholder value over the long term. In December 2012, we announced our resolution to issue new shares by way of third-party allotment to Innovation Network Corporation of Japan, Toyota Motor Corporation, Nissan Motor Co., Ltd., Keihin Corporation, DENSO Corporation, Canon Inc., Nikon Corporation, Panasonic Corporation and Yaskawa Electric Corporation, and in September 2013 we completed the issuance, thereby procuring capital totaling ¥150 billion. Following the issuance, Innovation Network Corporation of Japan became our largest and controlling shareholder. During the period between June 2017 and September 2018, Innovation Network Corporation of Japan divested itself of a portion of its holdings of our common stock, and INCJ (which, through the September 2018 restructuring of Innovation Network Corporation of Japan described below in "Principal and Selling Shareholders," succeeded to the remaining shares of our common stock that Innovation Network Corporation of Japan held immediately prior to such restructuring) now holds 32.15% of the shares of our common stock (as issued and outstanding as of December 31, 2020).

On February 24, 2017, we acquired Intersil as part of our effort to move beyond being a Japan-centric business and become a truly global company. On January 1, 2018, Intersil changed its name to Renesas Electronics America Inc. to further integrate the company and its operations into Renesas. On March 30, 2019 we acquired IDT to further contribute to this growth strategy. On January 1, 2020, IDT merged with Former Renesas Electronics America Inc. in an absorption-type merger and changed its trade name to Renesas Electronics America Inc.

In addition, in February 2021, we announced our proposed acquisition of Dialog. See "Proposed Acquisition of Dialog."

MANAGEMENT

Directors and Corporate Auditors

Our board of directors has the ultimate responsibility for the administration of our affairs. Our articles of incorporation provide for a board of directors consisting of not more than 15 members and provide for not more than six corporate auditors. All directors and corporate auditors are elected by our shareholders at general meetings of shareholders. The term of office for directors expires at the close of the ordinary general meeting of shareholders held with respect to the last fiscal year ended within one year after their election, and the term of office for corporate auditors expires at the close of the ordinary general meeting of shareholders held with respect to the last fiscal year ended within four years after their election, but directors and corporate auditors may serve any number of consecutive terms. Our board of directors elects one or more Representative Directors from among its members. Each of the Representative Directors has the authority to represent us in the conduct of our affairs.

Our corporate auditors are not required to be, and are not, certified public accountants. Our corporate auditors may not at the same time be directors, managers or any other type of employee of us or any of our subsidiaries, or accounting advisors or corporate executive officers of our subsidiaries. In addition, at least one-half of our corporate auditors must be outside corporate auditors who satisfy the requirement under the Companies Act. Each corporate auditor has a statutory duty to examine the financial statements and business reports to be submitted by the Representative Directors at general meetings of our shareholders, to report their opinions thereon to the shareholders and also to supervise the administration by the directors of our affairs. They are obligated to participate in meetings of the board of directors, and, if necessary, to express their opinion at such meetings, but are not entitled to vote.

We have the Compensation Committee to promote transparency and objectivity of decision-making regarding remuneration of our directors and executive officers. The committee deliberates the remuneration of directors and corporate auditors that is voted upon at general shareholders meetings. We also have the Nomination Committee to promote transparency and improve fairness in the selection or dismissal of our directors as well as to develop succession plans for our CEO.

The board of corporate auditors has a statutory duty to prepare and submit an audit report to the board of directors each year. A corporate auditor may note his/her opinion in the audit report if his/her opinion is different from the opinion of the board of corporate auditors expressed in the audit report. The board of corporate auditors is empowered to establish audit principles, the method of examination by the corporate auditors of our affairs and financial position and any other matters relating to the performance of the corporate auditors' duties.

The names and titles of our directors and corporate auditors as of the date of this offering circular are as follows:

Name	Title	Director or Corporate Auditor Since
Hidetoshi Shibata	Representative Director, President and CEO	March 2018
Tetsuro Toyoda(1)(3)	Outside Director (part-time)	February 2014
Jiro Iwasaki(1)	Outside Director (part-time)	June 2016
Selena Loh LaCroix(1)	Outside Director (part-time)	March 2020
Arunjai Mittal(1)	Outside Director (part-time)	March 2020
Noboru Yamamoto(1)	Outside Director (part-time)	March 2021
Kazuki Fukuda	Corporate Auditor (full-time)	June 2012
Kazuyoshi Yamazaki(2)	Outside Corporate Auditor (part-time)	June 2014
Takeshi Sekine(2)	Outside Corporate Auditor (part-time)	October 2013
Tomoko Mizuno(2)	Outside Corporate Auditor (part-time)	March 2021

Notes:

(1) Tetsuro Toyoda, Jiro Iwasaki, Selena Loh LaCroix, Arunjai Mittal and Noboru Yamamoto are outside directors, as stipulated in Item 15, Article 2 of the Companies Act.

(2) Kazuyoshi Yamazaki, Takeshi Sekine and Tomoko Mizuno are outside corporate auditors, as stipulated in Item 16, Article 2 of the Companies Act.

(3) Tetsuro Toyoda concurrently holds a position at INCJ, Ltd., and Takeshi Sekine concurrently holds a position at Japan Investment Corporation, or JIC.

Hidetoshi Shibata became our Representative Director, President and CEO in July 2019. His prior experience includes serving as Managing Director of Investment Group at Innovation Network Corporation of Japan (currently, JIC), Managing Director of Global Private Equity of Merrill Lynch Japan Securities Co., Ltd. (currently, BofA Securities Japan Co., Ltd.), and Partner of MKS Partners Limited. He started his career at Central Japan Railway Company in April 1995.

Tetsuro Toyoda became our Outside Director in February 2014. His prior experience includes serving as Partner of MKS Partners Limited and Contract Advisor of Deloitte Tohmatsu FAS Co., Ltd. (currently, Deloitte Tohmatsu Financial Advisory Co., Ltd.). He joined Innovation Network Corporation of Japan (currently, JIC) as a Managing Director in September 2009 and now serves as Chief Investment Officer and Member of the Board of the current INCJ, Ltd. He started his career at Tokio Marine and Fire Insurance Co., Ltd. (currently, Tokio Marine & Nichido Fire Insurance Co., Ltd.) in April 1986.

Jiro Iwasaki became our Outside Director in June 2016. His experience includes serving as Outside Corporate Auditor of GCA Savvian Corporation (currently GCA Corporation), Senior Managing Director and Outside Director of JVC Kenwood Holdings and Professor of Department of Business Administration of Faculty of Economics, Teikyo University. He concurrently serves as Outside Director of GCA Corporation and Outside Director of SBS Holdings, Inc. He started his career at Tokyo Denki Kagaku Kogyo K.K. (currently, TDK Corporation) in April 1974.

Selena Loh LaCroix became our Outside Director in March 2020. Her experience includes Senior Counsel of Texas Instruments Incorporated, Vice President and General Counsel Asia Pacific of Honeywell International and Board Member of Integrated Device Technology Inc. She concurrently serves as Board Member of National Association of Corporate Directors North Texas Chapter and Vice Chair of Technology Practice of Korn Ferry. She started her career at a Singapore law firm as an attorney at law in 1988.

Arunjai Mittal became our Outside Director in March 2020. His prior experience includes Division President & General Manager of Industry & Multimarkets Division and Member of the Management Board responsible for Regions, Sales, Marketing, Strategy Development and M&A at Infineon Technologies AG. He concurrently serves as Supervisory Board Member of Tesa SE, Director of Silicon Solution Ventures Pte Ltd., Non-Executive Chairman of Zero-Error Systems Pte Ltd., Board Member of Agency for Science and Technology Research of Singapore and Non-Executive Chairman of Advanced Micro Foundry Pte. Ltd. He started his career at Siemens Components Pte Ltd. in 1996.

Noboru Yamamoto became our Outside Director in March 2021, after serving as our Corporate Auditor from March 2018. His prior experience includes serving as Co-head of Investment Banking Division of BNP Paribas, Tokyo Branch, Managing Director of Investment Banking Unit of Citigroup Global Markets Japan Inc., (formerly Nikko Citigroup Securities Co., Ltd.), Managing Director of Lazard Frères K.K., Managing Director of PwC Advisory LLC (formerly PricewaterhouseCoopers, Financial Advisory Service Co., Ltd.) and our Corporate Auditor. He concurrently serves as Senior Advisor of CLSA Capital Partners K.K., Representative Director, Managing Partner and CEO of XIB Capital Partners Inc., Outside Director of Koki Holdings Co., Ltd. and Outside Director of Tsubaki Nakashima Co., Ltd. He started his career at Mazda Motor Corporation in April 1986.

Kazuki Fukuda became our Corporate Auditor in June 2012. His prior experience includes serving as Department Manager of NEC Corporation, as Senior Vice President of NEC (China) Co., Ltd., Associate Senior Vice President of NEC Soft, Ltd. (currently, NEC Solution Innovators, Ltd.) and Corporate Auditor of NEC Mobiling, Ltd. (currently, MX Mobiling Co., Ltd.). He started his career at NEC Corporation in April 1974.

Kazuyoshi Yamazaki became our Outside Corporate Auditor in June 2014. He concurrently serves as Managing Partner of Yamazaki Law Office and Outside Director of Nisul, Ltd. and Outside Director of REGAO, Ltd. He has been registered as an attorney-at-law of Japan since April 1983.

Takeshi Sekine became our Outside Corporate Auditor in October 2013. He has been registered as a certified public accountant of Japan since August 1995. His prior experience includes working at the Economic and Industrial Policy Bureau of Japan’s Minister of Economy, Trade and Industry. He joined Innovation Network Corporation of Japan (currently, JIC) as a Managing Director in December 2009 and concurrently serves as Managing Executive Officer and Head of Portfolio Monitoring at JIC. He started his career at Deloitte Touche Tohmatsu (currently, Deloitte Touche Tohmatsu LLC) in October 1991.

Tomoko Mizuno became our Outside Corporate Auditor in March 2021. Her prior experience includes Brand Manager of New Product Planning Department, Novartis Pharma K.K., Group Manager of Equa Marketing Group, Novartis Pharma K.K. and Brand Leader of Gardasil Marketing Group, MSD K.K. She concurrently serves as Director of Japan Automatic Machine Co., Ltd. She started her career at Bain & Company Japan, Inc. in July 1994.

Agreement with Our Outside Directors and Outside Corporate Auditors

Under the Companies Act and our articles of incorporation, we may enter into agreements with our outside directors and outside corporate auditors to limit their respective liabilities to us arising from their failure to execute their duties in good faith and without gross negligence, subject to applicable laws and regulations. We have entered into such agreements with each outside director and outside corporate auditor, which limit the maximum amount of their liability to us to the minimum amount stipulated by applicable laws and regulations, so long as those outside directors and outside corporate auditors have acted in good faith and without gross negligence in performing their duties.

Executive Officers

Our executive officers are appointed by our board of directors and have the primary executive responsibility within their appointed business areas. The names and titles of our executive officers as of the date of this offering circular are as follows:

Name	Title	Executive Officer Since
Hidetoshi Shibata	Representative Director, President and CEO	November 2013
Shuhei Shinkai	Senior Vice President and CFO	August 2019
Jason Hall	Senior Vice President and CLO	August 2019
Shinichi Yoshioka	Senior Vice President and CTO	July 2017
Takeshi Kataoka	Senior Vice President	April 2021
Tomomitsu Maoka	Senior Vice President	December 2015
Sailesh Chittipeddi	Executive Vice President	April 2019
Chris Allexandre	Senior Vice President	April 2019
Hiroto Nitta	Senior Vice President	April 2017
Roger Wendelken	Senior Vice President	April 2019
Masahiko Nozaki	Executive Vice President	April 2015

Executive Compensation

Compensation to our directors (excluding outside directors) in the fiscal year ended December 31, 2020 was ¥225 million including ¥61 million representing the fair value of the subscription rights to shares granted as stock options that vested during such fiscal year.

Stock Option Plan

We have granted to certain of our and our subsidiaries' directors, executive officers and employees subscription rights to shares as stock options under the terms set forth below.

Name (Resolution Date for Issuance)	Exercise price	Exercise period	Number of shares issuable upon exercise of stock options outstanding as of April 30, 2021[1]
No.1 of Year 2017 (March 13, 2017)	¥1 per share	At any time between April 4, 2017 and April 3, 2027	300,300 shares
No.2 of Year 2017 (March 13, 2017)	¥1 per share	At any time between April 4, 2017 and April 3, 2027	118,700 shares
No.4 of Year 2017 (June 27, 2017)	¥1 per share	At any time between July 13, 2017 and July 12, 2027	800 shares
No.8 of Year 2017 (December 27, 2017)	¥1 per share	At any time between January 16, 2018 and January 15, 2028	14,400 shares
No.1 of Year 2018 (March 16, 2018)	¥1 per share	At any time between April 3, 2018 and April 2, 2028	603,400 shares
No.2 of Year 2018 (March 16, 2018)	¥1 per share	At any time between April 3, 2018 and April 2, 2028	756,900 shares
No.3 of Year 2018 (June 27, 2018)	¥1 per share	At any time between August 1, 2018 and July 31, 2028	196,300 shares
No.4 of Year 2018 (June 27, 2018)	¥1 per share	At any time between August 1, 2018 and July 31, 2028	69,300 shares
No.5 of Year 2018 (September 26, 2018)	¥1 per share	At any time between November 1, 2018 and October 31, 2028	54,700 shares
No.2 of Year 2019 (March 25, 2019)	¥1 per share	At any time between April 9, 2019 and April 8, 2029	158,100 shares
No.3 of Year 2019 (March 25, 2019)	¥1 per share	At any time between April 9, 2019 and April 8, 2029	5,087,200 shares
No.4 of Year 2019 (April 23, 2019)	¥1 per share	At any time between June 1, 2019 and May 31, 2029	6,600 shares
No.5 of Year 2019 (April 23, 2019)	¥1 per share	At any time between June 1, 2019 and May 31, 2029	611,300 shares
No.6 of Year 2019 (June 25, 2019)	¥1 per share	At any time between July 26, 2019 and July 25, 2029	1,973,200 shares
No.7 of Year 2019 (June 25, 2019)	¥1 per share	At any time between July 26, 2019 and July 25, 2029	10,062,200 shares
No.8 of Year 2019 (July 30, 2019)	¥1 per share	At any time between August 24, 2019 and August 23, 2029	1,087,100 shares
No.9 of Year 2019 (July 30, 2019)	¥1 per share	At any time between August 24, 2019 and August 23, 2029	1,239,000 shares
No.10 of Year 2019 (August 27, 2019)	¥1 per share	At any time between September 21, 2019 and September 20, 2029	186,400 shares
No.11 of Year 2019 (September 24, 2019)	¥1 per share	At any time between November 1, 2019 and October 31, 2029	181,200 shares
No.12 of Year 2019 (September 24, 2019)	¥1 per share	At any time between November 1, 2019 and October 31, 2029	409,800 shares
No.13 of Year 2019 (November 26, 2019)	¥1 per share	At any time between December 26, 2019 and December 25, 2029	131,500 shares
No.14 of Year 2019 (December 25, 2019)	¥1 per share	At any time between February 1, 2020 and January 31, 2030	138,700 shares
No.1 of Year 2020 (May 26, 2020)	¥1 per share	At any time between July 1, 2020 and June 30, 2030	3,974,800 shares
No.2 of Year 2020 (May 26, 2020)	¥1 per share	At any time between July 1, 2020 and June 30, 2030	17,000,400 shares
No.3 of Year 2020 (July 30, 2020)	¥1 per share	At any time between August 31, 2020 and August 30, 2030	449,600 shares
No.4 of Year 2020 (July 30, 2020)	¥1 per share	At any time between August 31, 2020 and August 30, 2030	391,400 shares
No.5 of Year 2020 (July 30, 2020)	¥1 per share	At any time between September 1, 2020 and August 31, 2030	437,200 shares

Name (Resolution Date for Issuance)	Exercise price	Exercise period	Number of shares issuable upon exercise of stock options outstanding as of April 30, 2021(1)
No.6 of Year 2020 (July 30, 2020)	¥1 per share	At any time between September 1, 2020 and August 31, 2030	215,400 shares
No.7 of Year 2020 (October 29, 2020)	¥1 per share	At any time between December 1, 2020 and November 30, 2030	49,000 shares
No.8 of Year 2020 (October 29, 2020)	¥1 per share	At any time between December 1, 2020 and November 30, 2030	942,300 shares
No.1 of Year 2021 (January 29, 2021)	¥1 per share	At any time between February 27, 2021 and February 26, 2031	15,900 shares
No.2 of Year 2021 (January 29, 2021)	¥1 per share	At any time between February 27, 2021 and February 26, 2031	304,500 shares
No.3 of Year 2021 (January 29, 2021)	¥1 per share	At any time between February 27, 2021 and February 26, 2031	13,200 shares

Note:

(1) The numbers of shares issuable upon exercise of stock options are subject to adjustment based on stock split or certain other events. The above stock options are also subject to certain conditions for exercise as described below.

The stock options granted by us consist of (i) Time-based Stock Options (TSOs) and (ii) Performance-based Stock Options (PSOs). With respect to the TSOs, as a general rule, one-third (1/3) of the subscription rights to shares granted shall be vested each time one year passes from the grant date of such rights, and consequently, all granted subscription rights to shares shall be vested after three years have passed from the grant date. With respect to PSOs, as a general rule, after three years have passed from the grant date, the number of subscription rights to shares to be vested shall be determined taking into account a growth rate of our total shareholder return for such three-year period.

Generally, the grantee must continue to hold the position of director, corporate officer, corporate auditor, executive officer or employee of Renesas or one of our subsidiaries at the time of exercise; however, if the grantee ceases to hold such position, then the stock options held by such grantee are exercisable for a period of 13 months beginning on the day following the grantee’s ceasing to hold such position, subject to certain exceptions.

Furthermore, generally, pursuant to the stock option allotment agreements, each of the grantees of stock options granted has agreed that such grantee may exercise his or her options only during a five-year period from the day following the respective grant dates, unless certain conditions set forth in the stock option allotment agreement are met.

The stock options are subject to various forfeiture provisions. In the event that any of the following proposals is approved at a meeting of our shareholders (or, if a resolution of our shareholders is not required, resolved at a meeting of our board of directors), we may acquire all of the stock options under any of the series at no cost on a date separately designated by our board of directors: (i) a proposal for approval of a merger agreement providing that Renesas be dissolved; (ii) a proposal for approval of a company split agreement or company split plan providing that Renesas be split; (iii) a proposal for approval of a share exchange agreement or share transfer plan providing that Renesas become a wholly owned subsidiary; (iv) a proposal for approval of Renesas to acquire all such shares subject to a class-wide call pursuant to Article 171, Paragraph 1 of the Companies Act; (v) a proposal for approval of an amendment to our articles of incorporation specifying that, as a condition applicable to all shares issued by us, the acquisition of such shares by means of transfer shall require our approval; (vi) a proposal for approval of an amendment to our articles of incorporation specifying that, as a condition applicable to a class of shares that is the subject of the stock options, the acquisition of such shares by means of transfer shall require our approval or specifying that we may acquire all of such a class of shares by resolution at a meeting of our shareholders; (vii) a proposal for approval of a reverse stock split of a class of shares that is the subject of the stock options, if the number obtained by multiplying the number of such class of shares constituting one unit by the ratio of reverse stock split generates a fraction less than one share; or (viii) a proposal for approval of a demand for cash-out by our special controlling shareholders pursuant to the provisions of Article 179-3, Paragraph 1 of the Companies Act. Additionally, if the grantee of the stock options is unable to exercise its options due to the conditions for exercise described above, such as the condition that the grantee hold a certain position with Renesas or one of its subsidiaries, not being met, we may acquire all of such stock options at no cost.

New Stock Compensation Plan

In April 2021, we revised the stock option plan described above and introduced a new stock compensation plan for our and our subsidiaries' directors, executive officers and employees where shares are delivered to eligible persons after vesting, or the New Plan. Under the New Plan, we will grant to the eligible directors restricted stock units (RSUs) and/or performance share units (PSUs) in advance and, upon the vesting of such units, deliver to the eligible directors the shares of our common stock (one share per unit) corresponding to the number of the RSUs and the PSUs that vested. Through the introduction of the New Plan, we replaced the TSOs with the RSUs and the PSOs with the PSUs.

All directors (including outside directors) may be eligible to receive the RSUs. One-third (1/3) of the RSUs granted to directors (excluding outside directors) shall be vested each time one year passes from the grant date of such RSUs. Consequently, all RSUs so granted shall be vested after three years have passed from the grant date. The RSUs to be granted to outside directors shall be vested in full after one year has passed since the grant date. Directors (excluding outside directors) may be eligible to receive the PSUs. The number of the PSUs to be vested shall be determined taking into account a growth rate of our total shareholders return for the period of three years from April 1st of the year in which the PSUs are granted to the eligible directors.

Generally, the holder of units must continue to hold the position of director, corporate officer, corporate auditor, executive officer or employee of Renesas or one of our subsidiaries at the time of vesting. Otherwise, such units shall become null and void and no shares shall be delivered to such holder with respect to such units.

In the event that an eligible director is liable for any misconduct stipulated by our board of directors or falls under any of the circumstances stipulated by our board of directors, such director will lose all or part of the unvested units. Further, if it is later found that any such circumstance or any conduct that caused any such circumstance existed prior to the vesting of the units and our board of directors deems necessary, the eligible director has to return all or part of the shares of our common stock delivered upon vesting of such units or cash equivalent to the value of such shares, in each case, without any compensation.

If (i) a proposal for approval of a merger agreement providing that Renesas be dissolved; (ii) a proposal for approval of a company split agreement or company split plan providing that Renesas be split and be to allot all or a part of the consideration of the company split to the shareholders of Renesas; (iii) a proposal for approval of a share exchange agreement or share transfer plan providing that Renesas become a wholly owned subsidiary, (iv) a proposal for approval of Renesas to acquire all shares subject to a class-wide call pursuant to Article 171, Paragraph 1 of the Companies Act; (v) a proposal for approval of a reverse stock split, if the number of the shares to be issued upon the vesting with respect to all of the outstanding and unvested units become only fraction less than one share); or (vi) a proposal for approval of a demand for cash-out by our special controlling shareholders pursuant to the provisions of Article 179-3, Paragraph 1 of the Companies Act (in each case of (i) through (vi), limited to where the effective date occurs prior to the delivery of shares of our common stock under the New Plan) has been approved at a meeting of our shareholders (or, if a resolution of our shareholders is not required, resolved at a meeting of our board of directors), we may determine that any unvested units vest, number of which will be reasonably determined based on the period that has elapsed from the grant date of such unvested units, pursuant to a resolution of our board of directors.

SUBSIDIARIES AND AFFILIATE COMPANIES

As of March 31, 2021, we had 74 consolidated subsidiaries. The following table sets forth information with respect to our principal subsidiaries and equity method affiliate as of March 31, 2021.

Name	Issued capital (in thousands)	Percentage of voting rights[1] (indirect%)	Main business	Location
Renesas Semiconductor Manufacturing Co., Ltd.	¥100,000	100.0%	Manufacture of semiconductors (front-end)	Japan
Renesas Electronics (China) Co., Ltd.	$38,540	100.0	Sale of semiconductors in China	China
Renesas Electronics Hong Kong Limited	HK$15,000	100.0	Sale of semiconductors in Hong Kong	China
Renesas Electronics America Inc.[2]	$2,952,449	100.0	Design, application and sale of semiconductors in the United States	U.S.A.
Renesas Electronics Europe Limited	GBP32,920	100.0	Design, application and sale of semiconductors in Europe	UK
Renesas Electronics Europe GmbH.	€14,000	100.0	Design, application and sale of semiconductors in Europe	Germany
Renesas Semiconductor (Beijing) Co., Ltd.	$90,444	100.0	Manufacture of semiconductors (back-end)	China
Renesas Semiconductor (Suzhou) Co., Ltd.	$43,226	100.0 (6.33)*	Manufacture of semiconductors (back-end)	China
Renesas International Operations Sdn. Bhd	RM426,302	100.0 (100.0)*	Manage the operations of a portion of the group company	Malaysia
Intersil Luxembourg S.a.r.l	$91,585	100.0 (100.0)*	Holding company	Luxembourg
Renesas Electronics Canada Limited	C$44,560	100.0 (100.0)*	Application and sale of semiconductors	Canada
Renesas Electronics (Penang) Sdn. Bhd.	$551,785	100.0 (100.0)*	Application, manufacture and sale of semiconductors	Malaysia
Renesas Electronics Germany GmbH	€15,750	100.0 (100.0)*	Application, manufacture and sale of semiconductors	Germany
IDT Bermuda Ltd.	$462,119	100.0 (100.0)*	Holding company	Bermuda
GigPeak, Inc.	$225,344	100.0 (100.0)*	Holding company	U.S.A.

Notes:

(1) An asterisk denotes figures that include indirect ownership.

(2) On January 1, 2020 former IDT merged with Former Renesas Electronics America Inc. in an absorption-type merger and changed its trade name to Renesas Electronics America Inc.

PRINCIPAL AND SELLING SHAREHOLDERS

INCJ is our largest shareholder and will be the selling shareholder in both the international offering and the Japanese offering.

The following table sets forth the number of our common stock held of record as appearing on our register of shareholders on December 31, 2020, and the amount of each such shareholding as a percentage of the number of the then issued and outstanding shares (1,731,898,990 shares) and on an as adjusted basis to give effect to the global offering (assuming the over-allotment options are exercised in full):

	Actual			As adjusted for the global offering(2)	
Name of shareholder of our common stock	**Number of shares held of record**	**Percentage of issued and outstanding shares(1)**	**Shares being sold in the global offering**	**Number of shares held of record**	**Percentage of issued and outstanding shares**
INCJ, Ltd.	556,842,175	32.15%	170,172,400	386,669,775	20.01%
DENSO Corporation	153,143,625	8.84%	0	153,143,625	7.92%
Mitsubishi Electric Corporation	75,706,885	4.37%	0	75,706,885	3.91%
The Master Trust Bank of Japan, Ltd. (Trust Account)	74,433,700	4.29%	0	74,433,700	3.85%
Custody Bank of Japan, Ltd. (Sub-Trustee of Sumitomo Mitsui Trust Bank, Limited with respect to the NEC Retirement Benefit Trust Account)(3)	71,779,857	4.14%	0	71,779,857	3.71%
Hitachi, Ltd.	61,990,548	3.57%	0	61,990,548	3.20%
Toyota Motor Corporation	50,015,900	2.88%	0	50,015,900	2.58%
Custody Bank of Japan, Ltd. (Trust Account)	48,509,900	2.80%		48,509,900	2.51%
GIC PRIVATE LIMITED—C	31,149,900	1.79%	0	31,149,900	1.61%
Government of Norway	17,197,812	0.99%	0	17,197,812	0.89%
Total	1,140,770,302	65.82%	170,172,400	970,597,902	50.19%

Notes:

(1) Percentage of issued and outstanding shares is excluding treasury stock held as of December 31, 2020. As of December 31, 2020, we held 2,581 shares of common stock as treasury stock.

(2) Assuming that the over-allotment options granted by us and the selling shareholder to the international managers to purchase an aggregate of 14,549,400 newly issued shares and 12,376,200 existing shares, respectively, in connection with over-allotments, if any, in the international offering and to Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, to purchase up to an aggregate of 3,637,300 newly issued shares and 3,094,000 existing shares, respectively, in connection with over-allotments, if any, in the Japanese offering, are exercised in full.

(3) The numbers of shares held of record and percentages of issued and outstanding shares described above are with respect to shares held by Custody Bank of Japan, Ltd. in its capacity as the sub-trustee of Sumitomo Mitsui Trust Bank, Limited with respect to the NEC Retirement Benefit Trust Account. The voting rights of such shares will be exercised at the instruction of NEC Corporation.

The former Innovation Network Corporation of Japan (currently, JIC) is a corporation sponsored by the Japanese government and Japanese private enterprises aimed at promoting innovation and enhancing the value of businesses in Japan. JIC commenced operations as the Innovation Network Corporation of Japan in July 2009 and is incorporated under the Industrial Competitiveness Enhancement Act. JIC aims to provide financial, technological and management support to promote the creation of next-generation businesses through "open innovation" achieved by increasing the flow of technology and expertise beyond the boundaries of existing organizational structures.

JIC has a combined capital stock and capital surplus of approximately ¥380 billion, with the Japanese government providing an equity contribution of approximately ¥367 billion and 25 private corporations contributing the remainder. The Japanese government also provides guarantees of up to a total of ¥3.3 trillion for JIC investments, providing the organization with total investment resources of approximately ¥3.7 trillion. Innovation Network Corporation of Japan was established as a temporary enterprise for a period of 15 years at the time of its establishment and INCJ, which succeeded to all of the investment assets held by Innovation Network Corporation of Japan, is scheduled to dispose of all of its investment assets by March 31, 2025. As a result of our ¥150 billion issuance of our common stock through a third party allotment to Innovation Network Corporation of Japan and eight other business partners in September 2013, Innovation Network Corporation of

Japan became our largest shareholder. On June 20, 2017, Innovation Network Corporation of Japan sold 317,688,800 shares of our common stock in a global offering, on March 14, 2018, it sold an additional 75,026,425 shares to DENSO Corporation, and on April 26, 2018, it sold a further 203,359,600 shares in a global offering. In September 2018, Innovation Network Corporation of Japan underwent a restructuring, was renamed JIC and formed a separate subsidiary, INCJ, which succeeded to the contracts and shares related to us that were held by Innovation Network Corporation of Japan immediately prior to such restructuring. As of the date of this offering circular, INCJ remains our largest shareholder, holding 32.15% of the shares of our common stock (as issued and outstanding as of December 31, 2020).

DESCRIPTION OF OUR COMMON STOCK

Set out below is certain information concerning shares of our common stock, including brief summaries of the relevant provisions of our articles of incorporation and share handling regulations that are currently in effect, and of the Companies Act relating to joint stock corporations (*kabushiki kaisha*), and certain related laws and legislation, each as currently in effect.

General

We are a joint stock corporation under the Companies Act. The rights of shareholders of a joint stock corporation are represented by shares of capital stock in the corporation and shareholders' liability is limited to the amount of subscription for the shares.

We may, in principle, issue shares from our authorized but unissued share capital or transfer our shares held as treasury stock following a resolution to that effect by our board of directors. An increase in our authorized number of shares requires an amendment to our articles of incorporation, which generally requires approval of our shareholders as a whole and shareholders of each series of any class to whom detriment is likely to be caused by such amendment.

Our authorized share capital as of the date of this offering circular is 3,400,000,000 shares. As of March 31, 2021, 1,732,968,290 shares of our common stock (including those held as treasury stock) have been issued. Each of the shares in issue is fully paid and non-assessable and generally transferable through the book-entry system as described below.

On January 5, 2009, a new central clearing system for shares of Japanese listed companies was established pursuant to the Act Concerning Book-Entry Transfer of Corporate Bonds, Stocks, etc. (Act No. 75 of 2001, as amended) (including regulations promulgated thereunder; the "Book-Entry Act"), and the shares of all Japanese companies listed on any Japanese stock exchange, including shares of our common stock, became subject to this new system. On the same day, all existing share certificates for such shares became null and void. At present, JASDEC is the only institution that is designated by the relevant authorities as a clearing house which is permitted to engage in the clearing operations of shares of Japanese listed companies under the Book-Entry Act. Under the new clearing system, in order for any person to hold, sell or otherwise dispose of shares of Japanese listed companies, they must have an account at an account managing institution unless such person has an account at JASDEC. "Account managing institutions" are financial instruments traders (*i.e.*, securities firms), banks, trust companies and certain other financial institutions which meet the requirements prescribed by the Book-Entry Act, and only those financial institutions that meet further stringent requirements of the Book-Entry Act can open accounts directly at JASDEC. For the purpose of the description under "Description of Our Common Stock," we assume that the relevant person has no account at JASDEC.

Under the Book-Entry Act, any transfer of shares is effected through book entry, and the title to the shares passes to the transferee at the time when the transferred number of shares is recorded in the transferee's account at an account managing institution. The holder of an account at an account managing institution is presumed to be the legal owner of the shares held in such account.

Under the Companies Act and the Book-Entry Act, in order to assert shareholders' rights against us, the transferee must have its name and address registered in our register of shareholders, except in limited circumstances. Under the JASDEC clearing system, such registration is generally made upon an all shareholders notice (as described in "—Register of Shareholders") from JASDEC. For this purpose, shareholders are required to file their names and addresses with our transfer agent through the account managing institution and JASDEC. See "—Register of Shareholders" for more information.

Non-resident shareholders are required to appoint a standing proxy in Japan or provide a mailing address in Japan. Each such shareholder must give notice of its standing proxy or mailing address to the relevant account managing institution. Such notice will be forwarded to our transfer agent through JASDEC. Japanese securities firms and commercial banks customarily act as standing proxies and provide related services for standard fees. Notices from us to non-resident shareholders are delivered to the standing proxies or mailing addresses.

Distribution of Surplus

General

Under the Companies Act, the distribution of dividends takes the form of distribution of Surplus (as described in "—Restriction on Distribution of Surplus"; the same shall apply in this section). We may make a distribution of Surplus in cash and/or in kind, with no restrictions on the timing and frequency of such distributions. The Companies Act generally requires a joint stock corporation to make distributions of Surplus authorized by a resolution of a general meeting of shareholders. Distributions of Surplus may be made in cash or in kind in proportion to the number of shares of common stock held by each shareholder. A resolution of a general meeting of shareholders authorizing a distribution of Surplus must specify the kind and aggregate book value of the assets to be distributed, the manner of allocation of the assets to shareholders and the effective date of the distribution. If a distribution of Surplus is to be made in kind, we may, pursuant to a resolution of a general meeting of shareholders, grant a right to shareholders to require us to make the distribution in cash instead of in kind. If no such right is granted to shareholders, the relevant distribution of Surplus must be approved by a special resolution of a general meeting of shareholders. See "—Voting Rights" for more details regarding a special resolution.

In addition, under the Companies Act, a joint stock corporation which has a board of directors is able to make distributions of interim dividends by a resolution of the board of directors once a fiscal year if it is provided in its articles of incorporation. Our articles of incorporation provide that we may, by the resolution of the board of directors, distribute interim dividends to the shareholders whose names have been recorded in the latest register of shareholders as of June 30 of each year.

Our articles of incorporation provide that we are relieved of our obligation to pay any interim or year-end cash dividends that go unclaimed for three years after the date they first become payable.

In Japan, the "ex-dividend" date and the record date for any distribution of Surplus come before the date a company determines the amount of distribution of Surplus to be paid. The price of the shares of common stock generally goes ex-dividend on the second business day prior to the record date (or if the record date is not a business day, the third business day prior thereto).

Restriction on Distribution of Surplus

When we make a distribution of Surplus, we must, until the aggregate amount of our legal capital surplus and legal reserve reaches one quarter of our share capital, set aside in our legal capital surplus and/or legal reserve the smaller of (i) an amount equal to one-tenth of the amount of Surplus so distributed, or (ii) an amount equal to one quarter of our share capital less the aggregate amount of our legal capital surplus and legal reserve as of the date of such distribution.

The aggregate book value of Surplus distributed by us may not exceed a prescribed distributable amount, or the distributable amount, as calculated on the effective date of such distribution. The distributable amount at any given time shall be the amount of Surplus less the aggregate of the following:

(a) the book value of our treasury stock;

(b) in the event that we disposed of treasury stock after the end of the last fiscal year, the amount of consideration that we received for such treasury stock; and

(c) certain other amounts set forth in ordinances of the Ministry of Justice, including (if the sum of one-half of our goodwill and deferred assets exceeds the total of our share capital, legal capital surplus and legal reserve, each such amount as it appears on the balance sheet as of the end of the last fiscal year) all or certain part of such excess amount as calculated in accordance with the ordinances of the Ministry of Justice.

If we have become, at our option, a company with respect to which its consolidated balance sheet should also be considered in the calculation of the distributable amount (*renketsu haito kisei tekiyo kaisha*), we shall further deduct from the amount of Surplus the excess amount, if any, of (x) the total amount of the shareholders' equity appearing on our non-consolidated balance sheet as of the end of the last fiscal year and certain other amounts set forth in an ordinance of the Ministry of Justice over (y) the total amount of the shareholders' equity and certain other amounts set forth in an ordinance of the Ministry of Justice appearing on our consolidated balance sheet as of the end of the last fiscal year.

If we have prepared extraordinary financial statements as described below, and if such extraordinary financial statements have been approved by our board of directors or (if so required by the Companies Act) by our general meeting of shareholders, then the distributable amount must be adjusted to take into account the amount of profit or loss, and the amount of consideration for any of our treasury stock disposed of by us, during the period in respect of which such extraordinary financial statements have been prepared. We may prepare non-consolidated extraordinary financial statements consisting of a balance sheet as of any date subsequent to the end of the last fiscal year and an income statement for the period from the first day of the current fiscal year to the date of such balance sheet. Extraordinary financial statements so prepared by us must be audited by our corporate auditors and the independent auditor, as required by the Companies Act and in accordance with the details prescribed by ordinances of the Ministry of Justice.

For the purposes of this section, the amount of Surplus is the excess of the aggregate of I. through IV. below, less the aggregate of V. through VII. below:

I. the aggregate of other capital surplus and other retained earnings at the end of the last fiscal year;

II. in the event that we disposed of treasury stock after the end of the last fiscal year, the difference between the book value of such treasury stock and the consideration that we received for such treasury stock;

III. in the event that we reduced our share capital after the end of the last fiscal year, the amount of such reduction less the portion thereof that has been transferred to legal capital surplus and/or legal reserve (if any);

IV. in the event that legal capital surplus and/or legal reserve were reduced after the end of the last fiscal year, the amount of such reduction less the portion thereof that has been transferred to share capital (if any);

V. in the event that we canceled treasury stock after the end of the last fiscal year, the book value of such treasury stock;

VI. in the event that we distributed Surplus after the end of the last fiscal year, the aggregate of the following amounts:

   a. the aggregate amount of the book value of the distributed assets, excluding the book value of such assets that would be distributed to shareholders but for their exercise of the right to receive dividends in cash instead of dividends in kind;

   b. the aggregate amount of cash distributed to shareholders who exercised the right to receive a distribution in cash instead of a distribution in kind; and

   c. the aggregate amount of cash paid to shareholders holding fewer shares than the shares that were required in order to receive a distribution in kind;

VII. the aggregate amounts of a. through d. below, less e. through h. below:

   a. in the event that the amount of Surplus was reduced and transferred to legal capital surplus, legal reserve and/or share capital after the end of the last fiscal year, the amount so transferred;

   b. in the event that we distributed Surplus after the end of the last fiscal year, the amount set aside in legal capital surplus and/or legal reserve;

   c. in the event that, after the end of the last fiscal year, we disposed of treasury stock in the process of (a) a merger in which we acquired all rights and obligations of a company, (b) a corporate split in which we acquired all or a part of the rights and obligations of a split company, (c) a share exchange in which we acquired all shares of a company or (d) a partial share exchange in which we acquired shares, stock acquisition rights or bonds with stock acquisition rights of a company, the difference between the consideration that we received for such treasury stock and the book value of such treasury stock;

d. in the event that the amount of Surplus was reduced in the process of a corporate split in which we transferred all or a part of our rights and obligations after the end of the last fiscal year, the amount so reduced;

e. in the event that, after the end of the last fiscal year, we conducted any of (a) a merger in which we acquired all rights and obligations of a company, (b) a corporate split in which we acquired all or a part of the rights and obligations of a split company, (c) a share exchange in which we acquired all shares of a company or (d) a partial share exchange in which we acquired shares, stock acquisition rights or bonds with stock acquisition rights of a company, the aggregate amount of (i) the amount of our other capital surplus after such merger, corporate split, share exchange or partial share exchange, less the amount of our other capital surplus before such merger, corporate split, share exchange or partial share exchange, and (ii) the amount of our other retained earnings after such merger, corporate split, share exchange or partial share exchange, less the amount of our other retained earnings before such merger, corporate split, share exchange or partial share exchange;

f. in the event that an obligation to cover a deficiency, such as the obligation of a person who subscribed newly issued shares with an unfair amount to be paid in, was fulfilled after the end of the last fiscal year, the amount of other capital surplus increased by such payment;

g. in the event that we issued new shares or disposed of treasury stock without consideration to our director as compensation for services to be provided by such director to us after an allotment date of such new shares or treasury stock in accordance with terms provided in our articles of incorporation or approved by a resolution of a general meeting of shareholders after the end of the last fiscal year, the amount of other capital surplus changed by such issuance or disposal; and

h. in the event that, pursuant to an agreement entered into between our director and us in relation to an allotment of shares of treasury stock without consideration to such director as compensation in accordance with terms provided in our articles of incorporation or approved by a resolution of a general meeting of shareholders, we re-acquired such shares from such director without consideration after the end of the last fiscal year, the amount of the book value of treasury stock increased by such acquisition, which is equal to the amount of the book value reduced at the time of the allotment of such treasury stock.

For information as to Japanese taxes on dividends, see “Taxation—Japanese Taxation.”

Capital and Reserves

Under the Companies Act, the paid-in amount of any newly issued shares is required to be accounted for as share capital, although we may account for an amount not exceeding one-half of such paid-in amount as legal capital surplus. We may generally reduce legal capital surplus and/or legal reserve by resolution of a general meeting of shareholders subject to completion of protection procedures for creditors in accordance with the Companies Act with certain exceptions, and, if so decided by the same resolution, we may account for the whole or any part of the amount of such reduction as share capital. We may also transfer all or any part of Surplus to share capital, legal capital surplus or legal reserve by a resolution of a general meeting of shareholders, subject to certain restrictions. We may generally reduce our share capital by a special resolution of a general meeting of shareholders, subject to completion of protection procedures for creditors in accordance with the Companies Act, and, if so decided by the same resolution, we may account for the whole or any part of the amount of such reduction as legal capital surplus or legal reserve.

Stock Splits

Under the Companies Act, we may at any time split shares in issue into a greater number of the same class of shares by a resolution of the board of directors. When a stock split is to be made, if our only class of outstanding stock is common stock, we may increase the number of authorized shares in the same ratio as that of such stock split by amending our articles of incorporation, which amendment may be effected by resolution of our board of directors without approval by shareholders. When a stock split is to be made, we must give public notice of the stock split, specifying the record date therefor, at least two weeks prior to the record date.

Gratuitous Allocation

Under the Companies Act, we may allot any class of shares to our existing shareholders without any additional contribution by a resolution of our board of directors; provided that, although treasury stock may be allotted to shareholders, any such allotment of shares will not accrue to any shares held as treasury stock.

Reverse Stock Split

We may at any time consolidate our shares into a smaller number of shares by a special resolution of the general meeting of shareholders. We must disclose the reason for the reverse stock split at the general meeting of shareholders. When a reverse stock split is to be made, we must give public notice of the reverse stock split, at least two weeks (or, in certain cases where any fractions of shares are left as a result of reverse stock splits, 20 days) prior to the effective date of the reverse stock split.

Unit Share System

General

Our articles of incorporation provide that 100 shares constitute one "unit" of our common stock. The Companies Act permits us, by a resolution of the board of directors, to reduce the number of shares which constitutes one unit or abolish the unit share system, and amend our articles of incorporation to this effect without the approval of a general meeting of shareholders, with public notice after the effective date.

Transferability of Shares Constituting Less Than One Unit

Under the JASDEC clearing system, shares constituting less than one unit are transferable. Under the rules of the Japanese stock exchanges, however, shares constituting less than one unit do not comprise a trading unit, except in limited circumstances, and accordingly may not be sold on the Japanese stock exchanges.

Voting Rights of a Holder of Shares Constituting Less Than One Unit

A holder of shares constituting less than one unit cannot exercise any voting rights pertaining to those shares. In calculating the quorum for various voting purposes, the aggregate number of shares constituting less than one unit will be excluded from the number of outstanding shares. A holder of shares representing one or more whole units will have one vote for each whole unit represented.

A holder of shares constituting less than one unit does not have any rights related to voting, such as the right to participate in a demand for the resignation of a director, the right to participate in a request for the convocation of a general meeting of shareholders and the right to join with other shareholders to propose an agenda item to be included in the agenda of a general meeting of shareholders.

In accordance with the Companies Act, our articles of incorporation provide that a holder of shares constituting less than one unit does not have any other rights of a shareholder in respect of those shares, other than those provided by our articles of incorporation including the following rights:

- to receive dividends;
- to receive cash or other assets in the case of the reverse stock split or stock split, exchange or transfer of shares or merger;
- to be allotted shares and stock acquisition rights, without any additional contribution, when such rights are granted to shareholders; and
- to participate in any distribution of surplus assets upon liquidation.

Right of a Holder of Shares Constituting Less Than One Unit to Require Us to Purchase Its Shares

Under the Companies Act, a holder of shares constituting less than one unit may at any time request that we purchase its shares at their market price in accordance with our share handling regulations. As prescribed in our share handling regulations, such request must be made through an account management institution and JASDEC pursuant to the rules set by JASDEC.

Right of a Holder of Shares Constituting Less Than One Unit to Require Us to Sell to Such Holder Our Shares

In addition, a holder of shares constituting less than one unit may request that we sell to such holder such number of shares, that, when combined with the number of shares already held by such holder, constitute a whole unit of shares at their market price in accordance with our share handling regulations; provided that we be obliged to comply with such request only when there is a sufficient number of shares of treasury stock to accommodate such request. As prescribed in our share handling regulations, such request must be made through an account management institution and JASDEC pursuant to the rules set by JASDEC.

General Meetings of Shareholders

Our ordinary general meeting of shareholders is usually held every March in Tokyo, Japan. The record date for an ordinary general meeting of shareholders is December 31 of each year. In addition, we may hold an extraordinary general meeting of shareholders whenever necessary by giving at least two weeks' advance notice to shareholders.

Notice of convocation of a general meeting of shareholders setting forth the time, place, purpose thereof and certain other matters set forth in the Companies Act and relevant ordinances must be mailed to each shareholder having voting rights (or, in the case of a non-resident shareholder, to his or her standing proxy or mailing address in Japan) at least two weeks prior to the date set for such meeting. Such notice may be given to shareholders by electronic means, subject to the consent of the relevant shareholders.

Any shareholder or group of shareholders holding at least 3% of our total voting rights for a period of six months or more may request, with an individual shareholder notice (as described in "—Register of Shareholders"), the convocation of a general meeting of shareholders for a particular purpose. Unless such general meeting of shareholders is convened without delay or a convocation notice of a meeting which is to be held not later than eight weeks from the day of such request is dispatched, the requesting shareholder may, upon obtaining a court approval, convene such general meeting of shareholders.

Any shareholder or group of shareholders holding at least 300 voting rights or 1% of our total voting rights for a period of six months or more may propose a matter to be included in the agenda of a general meeting of shareholders, and may propose to describe such matter together with a summary of the proposal to be submitted by such shareholder in a notice to our shareholders, by submitting a request to a director at least eight weeks prior to the date set for such meeting, with an individual shareholder notice, provided that we may limit the number of such matters requested by each shareholder to 10.

The Companies Act enables a company to amend its articles of incorporation in order to lower the requirements for the number of shares held and shareholding period, as well as the period required for dispatching a convocation notice or submission of requests, all of which are required for any shareholder or group of shareholders to request the convocation of a general meeting of shareholders or to propose a matter to be included in the agenda of a general meeting of shareholders. Our articles of incorporation have not been amended to include standards lower than those otherwise required by the Companies Act.

Voting Rights

A shareholder of record is entitled to one vote per one unit of shares of our common stock, except that neither we nor any corporation, partnership or other similar entity no less than one-quarter of the voting rights of which are directly or indirectly owned by us shall have voting rights in respect of shares held by us or such entity. Except as otherwise provided by law or by our articles of incorporation, a resolution can be adopted at a general meeting of shareholders by a majority of the voting rights represented at the meeting. Shareholders may also exercise their voting rights through proxies, provided that the proxy is granted to one of our shareholders having voting rights. The Companies Act and our articles of incorporation provide that the quorum for the election of directors and corporate auditors is one-third of the total number of voting rights. Our articles of incorporation provide that shares of our common stock may not be voted cumulatively for the election of directors. Our shareholders may exercise voting rights in writing, or electronically in accordance with a resolution of the board of directors.

The Companies Act provides that a special resolution of the general meeting of shareholders is required for certain significant corporate transactions, including:

- any amendment to our articles of incorporation (except for amendments that may be authorized solely by the board of directors under the Companies Act);
- a reduction of share capital, subject to certain exceptions, such as a reduction of share capital for the purpose of replenishing capital deficiencies;
- a dissolution, merger or consolidation, subject to certain exceptions under which a shareholders' resolution is not required;
- the transfer of the whole or a substantial part of our business, subject to certain exceptions under which a shareholders' resolution is not required;
- the transfer of the whole or a part of shares or equity interests in any of our subsidiaries which meet certain requirements;
- the taking over of the whole of the business of any other corporation, subject to certain exceptions under which a shareholders' resolution is not required;
- a corporate split, subject to certain exceptions under which a shareholders' resolution is not required;
- a share exchange or share transfer for the purpose of establishing 100% parent-subsidiary relationships, subject to certain exceptions under which a shareholders' resolution is not required;
- a partial share exchange for the purpose of making another corporation a subsidiary, subject to certain exceptions under which a shareholders' resolution is not required;
- any issuance of new shares or transfer of existing shares held by us as treasury stock at a "specially favorable" price and any issuance of stock acquisition rights or bonds with stock acquisition rights at a "specially favorable" price or on "specially favorable" conditions to any persons other than shareholders;
- any acquisition by us of our own shares from specific persons other than our subsidiaries;
- a reverse stock split; or
- the removal of a corporate auditor.

Except as otherwise provided by law or in our articles of incorporation, a special resolution requires the approval of the holders of at least two-thirds of the voting rights of all shareholders present or represented at the meeting where a quorum is present. Our articles of incorporation provide that a quorum exists when one-third of the total number of voting rights is present or represented.

In addition, any issuance of new shares or stock acquisition rights or transfer of existing shares held by us as treasury stock, resulting in any shareholder becoming a majority shareholder of us is subject to an ordinary resolution of our general meeting of shareholders if any shareholder(s) having 10% or more of our voting rights shall have served a notice of an objection to such issuance of new shares or stock acquisition rights or a transfer of shares; provided that such issuance or stock acquisition rights or transfer of shares is not subject to an ordinary resolution of our general meeting of shareholders in case that such issuance or stock acquisition rights or transfer of shares is urgently necessary for us to continue our business.

Liquidation Rights

If we are liquidated, the assets remaining after payment of all taxes, liquidation expenses and debts will be distributed among our shareholders in proportion to the number of shares they hold.

Rights to Allotment of Shares

Under the Companies Act, shareholders of our common stock have no preemptive rights. Authorized but unissued shares may be issued at such times and on such terms as the board of directors may determine, so long as the limitations described in "—Voting Rights" with respect to the issuance of new shares at "specially favorable" prices are observed. The board of directors may, however, determine that shareholders shall be given rights to allotment regarding a particular issue of new shares, in which case such rights must be given on uniform terms to all shareholders as of a record date for which not less than two weeks' prior public notice must be given. Each of the shareholders to whom such rights are given must also be given notice of the expiration date thereof at least two weeks prior to the date on which such rights expire. The rights to allotment of new shares may not be transferred. However, the Companies Act enables us to allot stock acquisition rights to shareholders without consideration therefor, and such stock acquisition rights are transferable. See "—Stock Acquisition Rights."

In cases where a particular issuance of new shares violates laws and regulations or our articles of incorporation or will be performed in a manner that is materially unfair, and shareholders may suffer disadvantages therefrom, shareholders may file an injunction with a court of law to enjoin the issuance.

Stock Acquisition Rights

Subject to certain conditions and to the limitations on issuances at a "specially favorable" price or on "specially favorable" conditions described in "—Voting Rights," we may issue stock acquisition rights (*shinkabu yoyakuken*) and bonds with stock acquisition rights (*shinkabu yoyakuken-tsuki shasai*) by a resolution of the board of directors. Holders of stock acquisition rights may exercise their rights to acquire a certain number of shares within the exercise period as set forth in the terms of their stock acquisition rights. Upon exercise of stock acquisition rights, we will be obligated either to issue the relevant number of new shares or, alternatively, to transfer the necessary number of shares of treasury stock held by us.

Register of Shareholders

Under the book-transfer system, the registration of names, addresses and other information of shareholders in our register of shareholders will be made by us upon the receipt of the "all shareholders notice" (*soukabunushi tsuchi*) (with the exception that in the event of the issuance of new shares, we will register the names, addresses and other information of shareholders in our register of shareholders without the all shareholders notice from JASDEC) given to us by JASDEC, which will give us such all shareholders notice based on information provided by the account managing institutions. Such all shareholders notice will be made only in cases prescribed under the Book-Entry Act such as the cases when we fix the record date and the case when we make requests to JASDEC with any justifiable reason. Therefore, a shareholder may not assert shareholders' rights against us immediately after such shareholder acquires the shares, unless such shareholder name and address are registered in our register of shareholders upon receipt of the all shareholders notice; provided, however, that, in respect of the exercise of rights of minority shareholders defined under the Book-Entry Act, a shareholder may exercise such rights upon giving us an individual shareholder notice (*kobetsukabunushi tsuchi*) through JASDEC only during a certain period prescribed under the Book-Entry Act.

Record Date

The record date for fiscal year-end dividends and the determination of shareholders entitled to vote at the ordinary general meeting of shareholders is December 31 (Tokyo time). The record date for interim dividends is June 30 (Tokyo time). In addition, by a resolution of the board of directors we may set a record date for determining the shareholders entitled to other rights and for other purposes by giving at least two weeks' prior public notice.

Under the Book-Entry Act, we are required to give notice of each record date to JASDEC at least two weeks prior to each record date. JASDEC is required to promptly give us notice of the names and addresses of shareholders, the number of shares held by them and other relevant information as of each record date.

Acquisition by Us of Our Own Shares

We may acquire our own shares:

- by purchase on any stock exchange on which our shares are listed or by way of tender offer, pursuant to an ordinary resolution of a general meeting of shareholders or a resolution of the board of directors;
- by purchase from a specific party other than any of our subsidiaries, pursuant to a special resolution of a general meeting of shareholders; or
- by purchase from any of our subsidiaries, pursuant to a resolution of the board of directors.

If we acquire shares from a specific party other than any of our subsidiaries as specified above at a price higher than the greater of (i)(a) the closing price of our shares at the market trading such shares on the day immediately preceding the day on which such resolution is made or (b) if no sale takes place at such market on that day, the price at which the sale of our shares is executed on such market immediately thereafter and (ii) in the event that such shares are subject to a tender offer, the price set in the contract regarding such tender offer on such date, any shareholder may request that we include him or her as the seller of his or her shares in the proposed purchase. Any such acquisition of shares must satisfy certain requirements, such as that we may only acquire our own shares in an aggregate amount up to the amount that we may distribute as Surplus. See "—Distribution of Surplus" for more details regarding this amount.

We may hold shares acquired by us as treasury stock for any period and may cancel such shares by resolution of the board of directors. We may also transfer the shares held by us to any person, subject to a resolution of the board of directors, and subject also to other requirements similar to those applicable to the issuance of new shares, as described in "—Rights to Allotment of Shares." We may also utilize our treasury stock for the purpose of transfer to any person upon exercise of stock acquisition rights or for the purpose of acquiring another company by way of merger, share exchange, partial share exchange or corporate split through exchange of treasury stock for shares or assets of the acquired company.

Request by a Controlling Shareholder to Sell All Shares

A shareholder holding, directly or indirectly, 90% (or such other percentage above 90% as may be provided in our articles of incorporation) or more of voting rights has the right to request, subject to approval by the board of directors or, if the authority to make such determination has been delegated by resolution of the board of directors to an individual director, by such individual director, that the other shareholders and (if the controlling shareholder so determines) all holders of stock acquisition rights (in each case other than us and, if the controlling shareholder so determines, the controlling shareholder's wholly owned subsidiaries) sell to the controlling shareholder all shares and all stock acquisition rights, as the case may be, held by them (*kabushiki tou uriwatashi seikyu*). If the approval is granted by resolution of the board of directors or, if the authority to make such determination has been delegated by resolution of the board of directors to an individual director, by determination of such individual director, we will be required to give public notice thereof to all holders and registered pledgees of shares (and stock acquisition rights, as the case may be) not later than 20 days prior to the effective date of such sales, as proposed by the controlling shareholder.

Transfer Agent

Our transfer agent, as set forth in our share handling regulations, is Sumitomo Mitsui Trust Bank, Limited. They maintain our register of shareholders.

Sales by Us of Shares Held by Shareholders Whose Addresses are Unknown

Under the Companies Act, we are not required to send a notice to a shareholder if notices to such shareholder fail to arrive for a continuous period of five or more years at the registered address of such shareholder in our register of shareholders or at the address otherwise notified to us.

In addition, we may sell or otherwise dispose of or acquire the shares held by a shareholder whose location is unknown. Generally, if:

- notices to a shareholder fail to arrive for a continuous period of five or more years at the shareholder's registered address in our register of shareholders or at the address otherwise notified to us; and

- the shareholder fails to receive dividends on the shares for a continuous period of five or more years at the address registered in our register of shareholders or at the address otherwise notified to us,

we may sell or otherwise dispose of or acquire the shareholder's shares at the market price, after giving at least three months' prior public and individual notice, and hold or deposit the proceeds of such sale, disposal or acquisition for the shareholder.

JAPANESE FOREIGN EXCHANGE AND CERTAIN OTHER REGULATIONS

Foreign Exchange Regulations

The following is a general summary of major Japanese foreign exchange controls regulations applicable to holders of shares of our common stock or our voting rights thereunder who are "exchange non-residents" or "foreign investors," as described below. The statements regarding Japanese foreign exchange controls regulations set forth below are based on the laws and regulations in force and as interpreted by the Japanese authorities as of the date of this offering circular and are subject to subsequent changes in the applicable Japanese laws or interpretations thereof. This summary is not exhaustive of all possible foreign exchange controls considerations that may apply to a particular investor, and potential investors are advised to satisfy themselves as to the overall foreign exchange controls consequences of the acquisition, ownership and disposition of shares of our common stock or our voting rights thereunder by consulting their own advisors.

The Foreign Exchange Regulations, govern certain aspects relating to the acquisition and holding of shares of our common stock and our voting rights by "exchange non-residents" and by "foreign investors" (as these terms are defined below). In general, the Foreign Exchange Regulations currently in effect do not, however, affect transactions between exchange non-residents to purchase or sell shares of a Japanese listed corporation outside Japan using currencies other than Japanese yen.

"Exchange residents" are defined in the Foreign Exchange Regulations as:

(i) individuals who reside within Japan; or

(ii) corporations whose principal offices are located within Japan.

"Exchange non-residents" are defined in the Foreign Exchange Regulations as:

(i) individuals who do not reside in Japan; or

(ii) corporations whose principal offices are located outside Japan.

Generally, branches and other offices of non-resident corporations located within Japan are regarded as exchange residents. Conversely, branches and other offices of Japanese corporations located outside Japan are regarded as exchange non-residents.

"Foreign investors" are defined in the Foreign Exchange Regulations as:

(i) individuals who are exchange non-residents;

(ii) corporations or other entities organized under the laws of foreign countries or whose principal offices are located outside Japan;

(iii) corporations of which 50% or more of the total voting rights are held, directly or indirectly, by individuals and/or corporations falling within (i) and/or (ii) above;

(iv) partnerships under the Civil Code of Japan (Act No. 89 of 1896, as amended) established to invest in corporations, limited partnerships for investment under the Limited Partnership Act for Investment of Japan (Act No. 90 of 1998, as amended) or any other similar partnerships under foreign law of which (a) 50% or more of the total contributions are made by individuals and/or corporations falling within (i), (ii), (iii) above and/or (v) below or any other persons prescribed under the Foreign Exchange Regulations or (b) a majority of the general partners are individuals and/or corporations falling within (i), (ii), (iii) above and/or (v) below or any other persons prescribed under the Foreign Exchange Regulations; or

(v) corporations or other entities, a majority of whose directors or other officers (or directors or other officers having the power of representation) are individuals who are exchange non-residents.

Acquisition of Shares

In general, the acquisition by an exchange non-resident of shares of stock of a Japanese corporation from an exchange resident requires post facto reporting by the exchange resident to the Minister of Finance of Japan through the Bank of Japan. No such reporting requirement is imposed, however, if:

(i) the aggregate purchase price of the relevant shares is ¥100 million or less;

(ii) the acquisition is effected through any bank, financial instruments business operator or other entity prescribed by the Foreign Exchange Regulations acting as an agent or intermediary; or

(iii) the acquisition constitutes an "inward direct investment" described below.

Inward Direct Investment in Shares of Listed Corporations

With effect as from June 2020, an amendment to the Foreign Exchange Regulations came into effect and was fully implemented, and the requirements and procedures regarding the prior notifications of inward direct investment to the Minister of Finance and any other competent Ministers under the Foreign Exchange Regulations, as described below, were amended. Japanese listed corporations are classified into the following categories under the Foreign Exchange Regulations as so amended:

(i) corporations engaged only in businesses other than certain businesses designated by the Foreign Exchange Regulations as Designated Businesses, or the Designated Businesses;

(ii) corporations engaged in the Designated Businesses other than Core Sector Designated Businesses as defined in (iii) below, or the Non-Core Sector Designated Businesses; and

(iii) corporations engaged in the certain Designated Businesses designated by the Foreign Exchange Regulations as core sector businesses, or the Core Sector Designated Businesses.

We currently engage in the manufacturing of ICs with certain specifications which is the Core Sector Designated Business and we are classified as category (iii) above. For reference purposes only, the Minister of Finance publishes, and may update from time to time, a list that classifies Japanese listed corporations falling within any of the above categories.

Definition of Inward Direct Investment

If a foreign investor acquires shares or voting rights of a Japanese corporation that is listed on a Japanese stock exchange, such as the shares of our common stock, or that is traded on an over-the-counter market in Japan and, as a result of such acquisition, the foreign investor, in combination with any existing holdings, directly or indirectly holds 1% or more of the total number of issued shares or the total number of voting rights of the relevant corporation, such acquisition constitutes an "inward direct investment." In addition, an acquisition of the authority to exercise, either directly or through instructions, voting rights held by other shareholders that results in the foreign investor, in combination with any existing holdings, directly or indirectly holding 1% or more of the total number of voting rights of the relevant corporation constitutes an "inward direct investment."

In addition to the acquisitions of shares or voting rights described above, if a foreign investor (i) is granted the authority to exercise voting rights on behalf of other shareholders of the relevant corporation listed on a Japanese stock exchange regarding certain matters which may give such foreign investor the power to control, or may have a material influence on the management of such corporation such as the election or removal of directors or (ii) obtains consent from another foreign investor holding the voting rights of the relevant corporation to exercise the voting rights of such corporation held by such foreign investor jointly, and, in each case, as a result of these arrangements, the number of the voting rights directly or indirectly held by the foreign investor, including the total number of the voting rights subject to such authorization to exercise, or the sum of the number of the voting rights directly or indirectly held by the foreign investor and such other foreign investors subject to such joint voting agreement, as the case may be, is 10% or more of the total number of voting rights of the relevant corporation, each such arrangement regarding voting rights, which we refer to as a voting arrangement, also constitutes an "inward direct investment."

Additionally, if a foreign investor directly or indirectly holds 1% or more of the total voting rights of a Japanese listed corporation and, at a general meeting of shareholders, consents to certain proposals having material influence on the management of such corporation such as (i) the election of such foreign investor or any of its related persons (as defined in the Foreign Exchange Regulations) as directors or corporate auditors of the relevant corporation or (ii) transfer or discontinuation of its business, such consent also constitutes an "inward direct investment."

Prior Notification Requirements regarding Inward Direct Investment

If a foreign investor intends to consummate an acquisition of shares or voting rights of a Japanese listed corporation or the authority to exercise, either directly or through instructions, the relevant voting rights held by other shareholders that constitutes an "inward direct investment" as described above, in certain circumstances, such as where the foreign investor is in a country that is not listed on an exemption schedule in the Foreign Exchange Regulations, or where that Japanese corporation is engaged in the Designated Businesses, prior notification of the relevant inward direct investment must be filed with the Minister of Finance and any other competent Ministers.

However, if a foreign investor is seeking to acquire shares or voting rights of a Japanese listed corporation or the authority to exercise, either directly or through instructions, voting rights held by other shareholders and such acquisition would constitute an "inward direct investment," such foreign investor may be eligible for the exemptions, if certain conditions are met.

In the case of an acquisition of shares or voting rights or the authority to exercise, either directly or through instructions, voting rights of a Japanese listed corporation that is engaged in the Non-Core Sector Designated Businesses, the foreign investor may be exempted from the prior notification requirement, if such foreign investor complies with the following conditions (the "Exemption Conditions"):

(i) the foreign investor or its related persons (as defined in the Foreign Exchange Regulations) will not become directors or corporate auditors of the relevant corporation;

(ii) the foreign investor will not make certain proposals (as prescribed in the Foreign Exchange Regulations) at the general meeting of shareholders, including transfer or discontinuation of the Designated Businesses of the relevant corporation; and

(iii) the foreign investor will not access non-public technical information in relation to the Designated Businesses of the relevant corporation, or take certain other actions that may lead to the leak of such non-public technical information (as prescribed in the Foreign Exchange Regulations).

In addition, in the case of an acquisition of shares or voting rights or the authority to exercise, directly or through instructions, voting rights of a Japanese listed corporation that is engaged in the Core Sector Designated Businesses, which are currently engaged by us as described above, the foreign investor may be exempted from the prior notification requirement, if, as a result of such acquisition, the foreign investor, in combination with any existing holdings, directly or indirectly holds less than 10% of the total number of issued shares or voting rights of the relevant corporation, and such foreign investor complies with the Exemption Conditions and the following additional conditions:

(i) the foreign investor will not attend, or not cause any persons designated by it to attend, meetings of the relevant corporation's board of directors, or meetings of committees having authority to make important decisions, in respect of the Core Sector Designated Businesses of the relevant corporation; and

(ii) the foreign investor will not make, or not cause any persons designated by it to make, proposals to such board or committees or their members in writing or electronic form requesting any response or actions by certain deadlines in respect of the Core Sector Designated Businesses of the relevant corporation.

Notwithstanding the above, if a foreign investor falls under a category of disqualified investors designated by the Foreign Exchange Regulations (including (a) investors who have been sanctioned during the previous five years due to violations of the FEFTA and (b) certain investors that are state-owned enterprises or other related entities that are not otherwise accredited by the Minister of Finance), in no event may such foreign investor be eligible for the exemptions described above. On the other hand, if a foreign investor, excluding the disqualified investors described in the foregoing sentence, falls under a category of certain foreign financial institutions (as prescribed in the Foreign Exchange Regulations) and complies with the Exemption Conditions, such foreign investor may be eligible for the exemptions, even if the acquisition results in such foreign investor's directly or indirectly holding 10% or more of the total number of issued shares or voting rights of the corporation engaged in the Core Sector Designated Businesses.

In addition, if a foreign investor intends to make a voting arrangement with respect to a Japanese listed corporation engaged in the Designated Businesses or consents to a proposal at the general meeting of shareholders of such corporation, in each case, that constitutes an "inward direct investment" as described in "—Definition of Inward Direct Investment," in certain circumstances, prior notification of the relevant inward direct investment must be filed with the Minister of Finance and any other competent Ministers. In such cases, the exemptions from the prior notification requirements described above may not be available, except for cases where the relevant voting arrangement is a joint voting agreement with other foreign investors to exercise voting rights regarding matters other than certain matters which may give such foreign investor the power to control or may have a material influence on the management of the relevant corporation, such as the election or removal of directors.

Acquisitions of shares by foreign investors by way of stock split are not subject to the foregoing notification requirements.

Procedures for Prior Notification regarding Inward Direct Investment

If such prior notification is filed, the proposed inward direct investment may not be consummated until 30 days have passed from the date of filing during which time the Ministers will review the proposed inward direct investment, although this screening period may be shortened by such Ministers if they no longer deem it necessary to review the proposed inward direct investment or may be shortened to five business days, if the proposed inward direct investment is determined not to raise concerns from the perspective of national security or certain other factors. The Ministers may extend the screening period up to five months if they deem it necessary to continue to review the proposed inward direct investment and may recommend any modification or abandonment of the proposed inward direct investment and, if the foreign investor does not accept such recommendation, the Ministers may order the modification or abandonment of such inward direct investment. In addition, if the Ministers consider the proposed inward direct investment to be an inward direct investment that is likely to cause damage to the national security of Japan and, if a foreign investor (i) consummates such inward direct investment without filing the prior notification described above; (ii) consummates such inward direct investment before the expiration of the screening period described above; (iii) in connection with such inward direct investment, makes false statements in the prior notification described above; or (iv) does not follow the recommendation or order issued by the Ministers to modify or abandon such inward direct investment, the Ministers may order such foreign investor to divest of all or part of the shares acquired or take other measures.

Post Facto Reporting Requirements regarding Inward Direct Investment

A foreign investor who consummates an inward direct investment as described above through an acquisition of shares or voting rights or the authority to exercise, directly or through instructions, voting rights of a Japanese listed corporation that is engaged in the Designated Businesses, but is not subject to the prior notification requirements described above due to the exemptions from such prior notification requirements, in general, must file a *post facto* report of the relevant inward direct investment with the Minister of Finance and any other competent Ministers having jurisdiction over such Japanese corporation within 45 days of the date when, as a result of such acquisition, the foreign investor (excluding, in the cases of (i) and (ii) below, a foreign investor who falls under a category of certain foreign financial institutions (as prescribed in the Foreign Exchange Regulations)), in combination with any existing holdings, directly or indirectly holds (i) 1% or more but less than 3% of the total number of issued shares or voting rights, for the first time, (ii) 3% or more but less than 10% of the total number of issued shares or voting rights, for the first time, or (iii) 10% or more of the total number of issued shares or voting rights. In addition, if a foreign investor consummates the inward direct investment described above through the acquisition of shares or voting rights or the authority to exercise, directly or through instructions, voting rights of a Japanese listed corporation that is not engaged in the Designated Businesses (which is, in general, not subject to the prior notification requirements described above) and, as a result of such inward direct investment, such foreign investor, in combination with any existing holdings, directly or indirectly holds 10% or more of shares or voting rights of the total number of issued shares or voting rights of the relevant corporation, such foreign investor, in general, must file a *post facto* report of the relevant inward direct investment with the Minister of Finance and any other competent Ministers having jurisdiction over such Japanese corporation within 45 days of such inward direct investment.

Additionally, if a foreign investor consummates the inward direct investment described above through a voting arrangement with respect to a Japanese listed corporation that is not engaged in the Designated Businesses (which is, in general, not subject to the prior notification requirements described above), such foreign investor, in general, must file a *post facto* report of the relevant inward direct investment with the Minister of Finance and any other competent Ministers having jurisdiction over such Japanese corporation within 45 days of such inward direct investment.

Acquisitions of shares by foreign investors by way of stock split are not subject to the foregoing reporting requirements.

Dividends and Proceeds of Sale

Under the Foreign Exchange Regulations, dividends paid on, and the proceeds from sales in Japan of, shares held by exchange non-residents may generally be converted into any foreign currency and repatriated abroad.

Reporting of Substantial Shareholdings

The FIEA and its related regulations require any person who has become, beneficially and solely or jointly, a holder of more than 5% of the total issued voting shares of capital stock of a company listed on any Japanese stock exchange to file a report concerning the shareholdings with the Director-General of the competent Local Finance Bureau of the Ministry of Finance, in general, within five business days. A similar report must also be filed if the percentage of such holdings subsequently increases or decreases 1% or more, or if any change occurs in material matters set out in reports previously filed. For this purpose, shares issuable or transferable to such person upon his or her exchange of exchangeable securities, conversion of convertible securities or exercise of warrants or stock acquisition rights (including those incorporated in bonds with stock acquisition rights) are taken into account in determining both the size of his or her holding and the issuer's total issued share capital. These reports are required to be filed and made publicly available through the EDINET system, which is an electronic disclosure system operated by the Financial Services Agency of Japan.

TAXATION

The following summaries are not intended to be a complete analysis of the tax consequences under Japanese or U.S. law as a result of the acquisition, ownership and sale of the international shares by investors. Potential investors should consult their own tax advisers on the tax consequences of acquisition, ownership, sale, and other relevant circumstances concerning the international shares, including specifically the applicable tax consequences under Japanese or U.S. law, the law of the jurisdiction of their country of residence (if different) and any tax treaty between Japan and their country of residence.

Japanese Taxation

The following is a general summary of major Japanese tax consequences (limited to national tax) to shareholders of our common stock who are non-residents of Japan or non-Japanese corporations without a permanent establishment in Japan, which we refer to as “non-resident holders” in this section. The statements regarding Japanese taxation set forth below are based on the laws and treaties in force and as interpreted by the Japanese tax authorities as of the date of this offering circular and are subject to changes in the applicable Japanese laws or tax treaties, conventions or agreements, or interpretations thereof, occurring after that date. This summary is not exhaustive of all possible tax considerations that may apply to a particular investor, and potential investors are advised to satisfy themselves as to the overall tax consequences of the acquisition, ownership and disposition of shares of our common stock, including specifically the tax consequences under Japanese law, the laws of the jurisdiction of which they are resident, and any tax treaty, convention or agreement between Japan and their country of residence, by consulting their own tax advisers.

Generally, a non-resident holder of shares of our common stock is subject to Japanese income tax collected by way of withholding on dividends (meaning distributions from our retained earnings for Japanese corporate law purposes) paid by us, and such tax will be withheld prior to payment of dividends. Stock splits are, in general, not a taxable event. In the absence of any applicable tax treaty, convention or agreement reducing the maximum rate of Japanese withholding tax or allowing exemption from Japanese withholding tax, the rate of Japanese withholding tax applicable to dividends paid by Japanese corporations on their shares of stock to nonresident holders is generally 20.42% (20%, on or after January 1, 2038) under Japanese tax law. However, with respect to dividends paid on listed shares issued by a Japanese corporation (such as shares of our common stock) to non-resident holders, other than any individual shareholder who holds 3% or more of the total number of shares issued by the relevant Japanese corporation, the aforementioned 20.42% (20%, on or after January 1, 2038) withholding tax rate is reduced to (i) 15.315% for dividends to be paid on or before December 31, 2037 and (ii) 15% for dividends to be paid thereafter. Due to the imposition of a special additional withholding tax (2.1% of the original withholding tax amount) to secure funds for reconstruction from the Great East Japan Earthquake, the original withholding tax rate of 15% and 20%, as applicable, has been effectively increased, respectively, to 15.315% and 20.42%, during the period beginning on January 1, 2013 and ending on December 31, 2037.

If distributions were made from our capital surplus, rather than retained earnings, for Japanese corporate law purposes, the portion of such distributions in excess of the amount corresponding to a pro rata portion of return of capital as determined under Japanese tax laws would be deemed dividends for Japanese tax purposes, while the rest would be treated as return of capital for Japanese tax purposes. The deemed dividend portion, if any, would generally be subject to the same tax treatment as dividends as described above, and the return of capital portion would generally be treated as proceeds derived from the sale of shares of our common stock and subject to the same tax treatment as sale of shares of our common stock as described below. Distributions made in consideration of repurchase by us of our own shares or in connection with certain reorganization transactions will be treated substantially in the same manner.

As of the date of this offering circular, Japan has income tax treaties in force whereby the above-mentioned withholding tax rate is reduced, generally, to 15% for portfolio investors, with, among others, Canada, Denmark, Finland, Germany, Iceland, Ireland, Italy, Luxembourg, New Zealand, Norway and Singapore, while the income tax treaties with, among others, Australia, Austria, Belgium, France, Hong Kong, the Netherlands, Portugal, Sweden, Switzerland, the United Kingdom and the United States generally reduce the withholding tax rate to 10% for portfolio investors and the income tax treaties with, among others, Croatia and Spain generally reduce the withholding tax rate to 5% for portfolio investors. In addition, under the income tax treaty between the United States and Japan, dividends paid to pension funds which are qualified United States residents eligible to enjoy treaty benefits are exempt from Japanese income taxation by way of withholding or otherwise unless such dividends are derived from the carrying on of a business, directly or indirectly, by such pension funds. Under the income tax treaties with Austria, Belgium, Denmark, Iceland, the Netherlands, Spain, Switzerland and the United Kingdom, similar treatment will be applied to dividends paid to pension funds. Under Japanese tax law, any reduced maximum rate applicable under a tax treaty shall be available when such maximum rate is below the rate otherwise applicable under the Japanese tax law referred to above with respect to the dividends to be paid by us on shares of our common stock. A non-resident holder of shares of our common stock who is entitled, under any applicable tax treaty, to a reduced treaty rate of Japanese withholding tax, or exemption therefrom, as the case may be, is, in principle, required to submit an Application Form for Income Tax Convention Regarding Relief from Japanese Income Tax and Special Income Tax for Reconstruction on Dividends (together with any other required forms and documents) in advance, through the withholding agent, to the relevant tax authority before payment of dividends. A standing proxy for a non-resident holder may provide such application service. In this regard, a certain simplified special filing procedure is available for non-resident holders to claim treaty benefits of exemption from or reduction of Japanese withholding tax, by submitting a Special Application Form for Income Tax Convention Regarding Relief from Japanese Income Tax and Special Income Tax for Reconstruction on Dividends of Listed Stocks (together with any other required forms and documents). Non-resident holders who are entitled, under any applicable tax treaty, to a reduced rate of Japanese withholding tax below the rate otherwise applicable under Japanese tax law, or exemption therefrom, as the case may be, but fail to submit the required application in advance may nevertheless be entitled to claim a refund from the relevant Japanese tax authority of withholding taxes withheld in excess of the rate under an applicable tax treaty (if such non-resident holders are entitled to a reduced treaty rate under the applicable tax treaty) or the full amount of tax withheld (if such non-resident holders are entitled to an exemption under the applicable tax treaty), as the case may be, by complying with a certain subsequent filing procedure. We do not assume any responsibility to ensure withholding at the reduced rate, or exemption therefrom, for nonresident holders who would be so eligible under an applicable tax treaty but where the required procedures as stated above are not followed.

Gains derived from the sale or other disposition of shares of our common stock outside Japan by a nonresident holder are not, in general, subject to Japanese income tax or corporation tax.

Japanese inheritance tax and gift tax, at progressive rates, may be payable by an individual who has acquired shares of our common stock from an individual as a legatee, heir or donee, even if none of the acquiring individual, the decedent or the donor is a Japanese resident.

Potential investors should consult with their own tax advisors regarding the Japanese tax consequences of the ownership and disposition of shares of common stock in light of their particular situations.

Certain U.S. Federal Income Tax Considerations

The following summary describes certain U.S. federal income tax consequences of the ownership and disposition of our shares. The discussion set forth below is applicable only to U.S. Holders (as defined below) (i) who are residents of the United States for purposes of the Convention between the Government of the United States of America and the Government of Japan for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion With Respect to Taxes on Income, or the Treaty, (ii) whose shares are not, for purposes of the Treaty, effectively connected with a permanent establishment in Japan and (iii) who otherwise qualify for the full benefits of the Treaty. This discussion deals only with U.S. Holders that acquire our shares pursuant to this offering and hold such shares as capital assets for U.S. federal income tax purposes (generally, property held for investment). This summary does not represent a detailed description of the U.S. federal income tax consequences applicable to you if you are subject to special treatment under the U.S. federal income tax laws, including if you are:

- a broker or dealer in securities or currencies;
- a bank or other financial institution;
- a regulated investment company;
- a real estate investment trust;
- a pension plan;
- an insurance company;

- a tax-exempt organization (including a private foundation);
- a U.S. expatriate;
- a person holding our shares as part of a hedging, integrated or conversion transaction, a constructive sale or a straddle;
- a trader in securities that has elected the mark-to-market method of accounting for your securities;
- a person liable for alternative minimum tax;
- a person who owns or is deemed to own 10% or more of our stock (by vote or value);
- a partnership or other pass-through entity for U.S. federal income tax purposes; or
- a person whose "functional currency" is not the U.S. dollar.

As used herein, "U.S. Holder" means a beneficial owner of our shares that is, for U.S. federal income tax purposes, any of the following:

- an individual citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

The discussion below is based upon the provisions of the Internal Revenue Code of 1986, as amended, or the Code, and regulations, rulings and judicial decisions thereunder, as well as on the Treaty, at the date hereof, and such authorities may be repealed, revoked or modified (possibly on a retroactive basis) so as to result in U.S. federal income tax consequences different from those discussed below.

If a partnership (or other entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds our shares, the tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. If you are a partnership or a partner of a partnership holding our shares, you should consult your tax advisors.

This summary does not contain a detailed description of all the U.S. federal income tax consequences that may be relevant to you in light of your particular circumstances and does not address the effects of any state, local or non-U.S. tax laws or any other U.S. federal tax laws (e.g., estate or gift tax laws), including the Medicare tax on net investment income.

If you are considering the purchase of our shares, you should consult your own tax advisors concerning the U.S. federal tax consequences to you in light of your particular situation as well as any consequences arising under the laws of any other taxing jurisdiction.

Taxation of Distributions

The gross amount of any distributions on our shares (including amounts withheld to reflect Japanese withholding taxes) will be taxable as dividends to the extent paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent that the amount of any distribution exceeds our current and accumulated earnings and profits for a taxable year, the distribution will first be treated as a tax-free return of capital, causing a reduction in the adjusted tax basis of our shares, and the balance in excess of adjusted tax basis will be taxed as capital gain recognized on a sale or exchange (see "—Taxation of Gains" below). However, we do not expect to determine earnings and profits in accordance with U.S. federal income tax principles. Therefore, you should expect that distributions will generally be reported as a dividend.

Any dividends that you receive (including any withheld taxes) will be includable in your gross income as ordinary income on the day actually or constructively received by you. Such dividends will not be eligible for the dividends received deduction generally allowed to corporations under the Code.

Subject to applicable limitations (including a minimum holding period requirement), dividends received by non-corporate U.S. Holders from a qualified foreign corporation may be treated as "qualified dividend income" that is subject to reduced rates of taxation. A qualified foreign corporation includes a foreign corporation that is eligible for the benefits of a comprehensive income tax treaty with the United States which the U.S. Treasury Department determines to be satisfactory for these purposes and which includes an exchange of information provision. The U.S. Treasury Department has determined that the Treaty meets these requirements, and we believe we will be eligible for the benefits of the Treaty. Thus, we believe that dividends we pay on our shares to non-corporate U.S. Holders will be potentially eligible for these reduced tax rates. However, the rate reduction will not apply if we are a passive foreign investment company, as discussed under "—Passive Foreign Investment Company" below, for the taxable year in which a dividend is paid or for the preceding taxable year. You should consult your own tax advisors regarding the application of these rules to your particular circumstances.

The amount of any dividend paid in yen will equal the U.S. dollar value of the yen received calculated by reference to the exchange rate in effect on the date the dividend is actually or constructively received by you, regardless of whether the yen are converted into U.S. dollars at such time. If the yen received as a dividend are converted into U.S. dollars on the date of receipt, you will generally not be required to recognize foreign currency gain or loss in respect of the dividend income. If the yen received as a dividend are not converted into U.S. dollars on the date of receipt, you will have a tax basis in the yen equal to their U.S. dollar value at the date of receipt. Any gain or loss realized on a subsequent conversion or other disposition of the yen will be treated as U.S. source ordinary income or loss.

The maximum rate of withholding tax on dividends paid to you pursuant to the Treaty is 10%. You will generally be required to properly demonstrate to the Japanese tax authorities your entitlement to the reduced rate of withholding under the Treaty. See "—Japanese Taxation" above for requirements for obtaining a reduced rate under the Treaty. Subject to certain conditions and limitations, Japanese withholding taxes on dividends (at a rate not exceeding the applicable Treaty rate) may be treated as foreign taxes eligible for credit against your U.S. federal income tax liability. For purposes of calculating the foreign tax credit, dividends paid on our shares will be treated as income from sources outside the United States and will generally constitute passive category income. However, in certain circumstances, if you have held our shares for less than a specified minimum period during which you are not protected from risk of loss, or are obligated to make payments related to the dividends, you will not be allowed a foreign tax credit for foreign taxes imposed on dividends paid on our shares. If you do not elect to claim a U.S. foreign tax credit, you may instead claim a deduction for Japanese income tax withheld, subject to applicable limitations and only for a taxable year in which you elect to do so with respect to all foreign income taxes paid or accrued in such taxable year. The rules governing the foreign tax credit are complex. You are urged to consult your tax advisors regarding the availability of the foreign tax credit or deduction, as applicable, under your particular circumstances.

Taxation of Gains

You generally will recognize capital gain or loss upon the sale, exchange or other taxable disposition of our shares equal to the difference between the amount realized on the sale, exchange or other taxable disposition of such shares and your adjusted tax basis in such shares, both determined in U.S. dollars. Any such gain or loss will be long-term capital gain or loss if you have held our shares for more than one year at the time of disposition. Certain non-corporate U.S. Holders (including individuals) may be eligible for preferential rates of U.S. federal income tax in respect of long-term capital gains. The deductibility of capital losses is subject to limitations under the Code. Any gain or loss recognized by you on the sale, exchange or other taxable disposition of our shares generally will be treated as U.S. source gain or loss for U.S. foreign tax credit purposes.

Passive Foreign Investment Company

In general, we will be a passive foreign investment company, or PFIC, for U.S. federal income tax purposes for any taxable year in which, after applying certain look-through rules, (i) at least 75% of our gross income is passive income, or (ii) at least 50% of the value of our assets (generally determined on the basis of a quarterly average) is attributable to assets that produce or are held for the production of passive income. For this purpose, passive income generally includes dividends, interest, royalties and rents (other than royalties and rents derived in the active conduct of a trade or business and not derived from a related person). We do not believe that we are a PFIC and, based on our current projected income, assets and activities, we do not expect to become a PFIC in the foreseeable future. However, there can be no assurance in this regard, as the determination of whether we are a PFIC is made annually. Accordingly, it is possible that we may become a PFIC in the current or any future taxable year due to changes in our asset or income composition.

If we are or become a PFIC, you could be subject to additional U.S. federal income taxes on gain recognized with respect to our shares and on certain distributions, plus an interest charge on certain taxes treated as having been deferred under the PFIC rules. Although the determination of whether we are a PFIC is made annually, if we are a PFIC for any taxable year in which you hold our shares, we would generally continue to be treated as a PFIC with respect to you for all succeeding years during which you hold the shares, even if we ceased to meet the threshold requirements for PFIC status during such years. However, if we cease to be a PFIC, you can avoid the continuing impact of the PFIC rules by making a special election to recognize gain as if your shares had been sold on the last day of the last taxable year during which we were a PFIC.

You will generally be required to file Internal Revenue Service, or IRS, Form 8621 if you hold our shares in any year in which we are classified as a PFIC. You are urged to consult your tax advisors concerning the U.S. federal income tax consequences of holding shares if we are considered a PFIC in any taxable year, including the potential availability and effect of any elections which would provide for alternative treatment.

The discussions above under "—Taxation of Distributions" and "—Taxation of Gains" are written on the basis that we will not be or become a PFIC for U.S. federal income tax purposes.

Information Reporting and Backup Withholding

In general, information reporting will apply to dividends in respect of our shares and the proceeds from the sale, exchange or other taxable disposition of our shares that are paid to you within the United States (and in certain cases, outside the United States), unless you establish that you are an exempt recipient. A backup withholding tax may apply to such payments if you fail to provide your correct taxpayer identification number or certification of exempt status or fail to report in full dividend and interest income.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your U.S. federal income tax liability provided that the required information is timely furnished to the IRS.

The above description is not intended to constitute a complete analysis of all tax consequences relating to the ownership or disposition of our shares. Each holder should consult such holder's own tax advisors concerning the overall tax consequences to it, including the consequences under laws other than U.S. federal income tax laws, of an investment in our shares.

CERTAIN BENEFIT PLAN INVESTOR CONSIDERATIONS

The following is a summary of certain considerations associated with the purchase and, in certain instances, holding of the international shares (including interests in international shares)by (i) employee benefit plans subject to Title I of the U.S. Employee Retirement Income Security Act of 1974, as amended ("ERISA"), (ii) plans described in Section 4975 of the Code which are subject to Section 4975 of the Code (including an individual retirement account ("IRA") and a Keogh plan) or provisions under other U.S. or non-U.S. federal, state, local or other laws or regulations that are similar to the fiduciary responsibility or prohibited transaction provisions of Title I of ERISA or Section 4975 of the Code (collectively, "Similar Laws"), and (iii) entities whose underlying assets are considered to include "plan assets" (within the meaning of regulations issued by the U.S. Department of Labor, set forth in 29 C.F.R. Section 2510.3-101, as modified by Section 3(42) of ERISA of any such plan, account or arrangement (each of the foregoing described in clause (i), (ii) and (iii) referred to herein as a "Plan").

General Fiduciary Matters

ERISA and the Code impose certain duties on persons who are fiduciaries of a Plan subject to Title I of ERISA or Section 4975 of the Code (each, a "Covered Plan") and prohibit certain transactions involving the assets of a Covered Plan and its fiduciaries or other interested parties. Under ERISA and the Code, any person who exercises discretionary authority or control over the administration of a Covered Plan or the management or disposition of the assets of a Covered Plan, or who renders investment advice for a fee or other compensation to a Covered Plan, is generally considered to be a fiduciary of the Covered Plan.

When considering an investment in international shares with the assets of any Plan, a fiduciary should determine, among other things, whether the investment is in accordance with the documents and instruments governing the Plan and the applicable provisions of ERISA, the Code or any Similar Laws relating to a fiduciary's duties to the Plan including, without limitation, the prudence, diversification, delegation of control, conflicts of interest and prohibited transaction provisions of ERISA, the Code and any applicable Similar Laws.

Plan fiduciaries should consider the fact that none of the issuer, the International Managers or certain of the issuer's or International Managers' affiliates (the "Transaction Parties") is acting, or will act, as a fiduciary to any Plan with respect to the decision to purchase the international shares in connection with the initial offer and sale. The Transaction Parties are not undertaking to provide impartial investment advice or advice based on any particular investment need, or to give advice in a fiduciary capacity, with respect to such decision to purchase the international shares.

Prohibited Transaction Issues

Section 406 of ERISA and Section 4975 of the Code prohibit Covered Plans from engaging in specified transactions involving plan assets with persons or entities who are "parties in interest," within the meaning of Section 406 of ERISA, or "disqualified persons," within the meaning of Section 4975 of the Code, unless an exemption is available. A party in interest or disqualified person who engages in a non-exempt prohibited transaction may be subject to excise taxes and other penalties and liabilities under ERISA and the Code and may result in the disqualification of an IRA. In addition, the fiduciary of the Plan that engages in such a non-exempt prohibited transaction may be subject to penalties and liabilities under ERISA and/or the Code. For example, the acquisition of the international shares by a Covered Plan with respect to which the Transaction Parties are considered a party in interest or a disqualified person may constitute or result in a direct or indirect prohibited transaction under Section 406 of ERISA and/or Section 4975 of the Code, unless the investment is acquired and is held in accordance with an applicable statutory, class or individual prohibited transaction exemption. In this regard, the U.S. Department of Labor has issued prohibited transaction class exemptions, or PTCEs, that potentially may apply to the acquisition of our international shares. These class exemptions include, without limitation, PTCE 84-14 respecting transactions determined by independent qualified professional asset managers, PTCE 90-1 respecting insurance company pooled separate accounts, PTCE 91-38 respecting bank collective investment funds, PTCE 95-60 respecting life insurance company general accounts and PTCE 96-23 respecting transactions determined by in-house asset managers. In addition, Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code provide relief from the prohibited transaction provisions of ERISA and Section 4975 of the Code for certain transactions between a Covered Plan and a person that is a party in interest or disqualified person with respect to the Covered Plan solely by reason of providing services to the Covered Plan or a relationship with such a service provider, provided that neither the person transacting with the Covered Plan nor any of its affiliates has or exercises any discretionary authority or control or renders any investment advice with respect to the assets of the Covered Plan involved in the transaction and provided further that the Covered Plan pays no more and receives no less than adequate consideration in connection with the transaction.

Each of the above noted exemptions contains conditions and limitations on its application. Fiduciaries of Covered Plans considering acquiring our international shares in reliance on these or any other exemption should carefully review the exemption to ensure it is applicable to their particular circumstances. There can be no assurance that any of the foregoing exemptions or any other exemption will be available with respect to any or all otherwise prohibited transactions that may occur in connection with an investment in our international shares, or that all of the conditions of any such exemptions will be satisfied.

Certain government plans, non-U.S. plans and certain church plans, while not subject to the prohibited transaction provisions of Section 406 of ERISA or Section 4975 of the Code, may nevertheless be subject to Similar Laws. Fiduciaries of such Plans should consult with their counsel before investing in international shares.

Because of the foregoing, the international shares should not be acquired by any Plan, unless such purchase will not constitute or result in a non-exempt prohibited transaction under ERISA and/or the Code or any applicable Similar Law.

Representation

Accordingly, by its acceptance of the international shares, each purchaser will be deemed to have represented and warranted that either (i) no portion of the assets used by such purchaser to acquire the international shares constitutes assets of any Plan or (ii) the acquisition, holding and/or disposition of the international shares by such purchaser will not result in a violation of the fiduciary rules under ERISA or constitute or result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or a similar violation under any applicable Similar Laws.

The foregoing discussion is general in nature and is not intended to be all-inclusive. Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries or other persons considering purchasing the international shares on behalf of, or with the assets of, any Plan, consult with their counsel regarding the potential applicability of ERISA, Section 4975 of the Code or any Similar Law to the investment and whether an exemption would be required and if one is applicable to any particular otherwise prohibited transaction.

Neither this discussion nor anything provided in this offering circular is, or is intended to be, investment advice directed at any potential Plan purchasers, or at Plan purchasers generally, and is in no respect a representation or recommendation by the Transaction Parties that such an investment meets all relevant legal requirements with respect to investments by Plans generally or any particular Plan or that such an investment is appropriate or advisable for Plans generally or for any particular Plan. Such purchasers of the international shares should consult and rely on their own counsel and advisers as to whether an investment in the international shares is suitable for the Plan. Each purchaser has exclusive responsibility for ensuring that its investment in the international shares (and any interest therein) does not violate the fiduciary responsibility or prohibited transaction rules of ERISA or the Code, or the provisions of applicable Similar Laws.

TRANSFER RESTRICTIONS

Because of the following restrictions, investors are advised to consult legal counsel prior to making any reoffering, resale, pledge or transfer of the international shares.

The international offering is being made in accordance with Rule 144A and Regulation S under the U.S. Securities Act. The international shares have not been and will not be registered under the U.S. Securities Act or with any securities regulatory authority of any U.S. state or other jurisdiction and, accordingly, may not be offered, sold, pledged or otherwise transferred or delivered within the United States or to, or for the account or benefit of, U.S. persons except pursuant to an exemption from the registration requirements under the U.S. Securities Act. Terms used in this section have the same meaning as defined in Rule 144A or Regulation S.

Shares Offered in Reliance on Rule 144A

Each purchaser of the international shares offered hereby in reliance on Rule 144A will be deemed to have represented and agreed as follows:

(1) the purchaser (A) is a QIB, (B) is aware that the sale of the shares to it is being made in reliance on Rule 144A, and (C) is acquiring the shares for its own account or for the account of a QIB, as the case may be;

(2) the purchaser understands that the Rule 144A shares have not been and will not be registered under the U.S. Securities Act and may not be reoffered, resold, pledged or otherwise transferred, except (A) (i) to a person who the purchaser and any person acting on its behalf reasonably believes is a QIB purchasing for its own account or for the account of a QIB in a transaction meeting the requirements of Rule 144A, (ii) in an offshore transaction complying with Rule 903 or Rule 904 of Regulation S, or (iii) pursuant to an exemption from registration under the U.S. Securities Act provided by Rule 144 thereunder (if available) and (B) in accordance with all applicable securities laws of the states of the United States; and

(3) the purchaser will not deposit or cause to be deposited shares into any unrestricted depositary receipt facility established or maintained by a depositary bank relating to the shares, unless or until the shares are no longer deemed restricted securities within the meaning of Rule 144(a)(3) under the U.S. Securities Act.

No representation can be made as to the availability of the exemption provided by Rule 144 for resales of the shares offered hereby.

Shares Offered in Reliance on Regulation S

Each purchaser of international shares offered hereby in reliance on Regulation S will be deemed to have represented and agreed as follows:

(1) the purchaser is acquiring such Regulation S shares in an offshore transaction in accordance with Rule 903 or Rule 904 of Regulation S; and

(2) the purchaser understands that such Regulation S shares have not been and will not be registered under the U.S. Securities Act and may not be reoffered, resold, pledged or transferred within the United States except pursuant to an exemption from registration under the U.S. Securities Act.

CLEARANCE AND SETTLEMENT OF THE INTERNATIONAL SHARES

JASDEC

The central clearing system of listed shares of Japanese companies under the Book-Entry Act applies to shares of our common stock. Under this system, any transfer of shares of our common stock is effected through the central book-entry transfer system. See "Description of Our Common Stock—General."

Euroclear and Clearstream

Book-entry interests in the international shares may be held through Euroclear Bank S.A./N.V., or Euroclear, or Clearstream Banking, *societe anonyme*, or Clearstream, and, if so, the relevant purchasers must deliver their international shares to the nominee in Japan for the relevant clearing system which will hold the international shares in JASDEC. Settlement for the purchasers of the international shares will be made only through accounts of participating institutions having a clearing account with JASDEC.

The aggregate holdings of book-entry interests in the shares in Euroclear and Clearstream will be reflected in the book-entry accounts for each of these institutions. Euroclear or Clearstream, as the case may be, and every other intermediate holder in the chain to the beneficial owner of book-entry interest in the shares, will be responsible for establishing and maintaining accounts for their respective participants and clients having interests in the book-entry interests in the international shares.

Fees

We will not impose any fees in respect of the international shares except for fees as provided for in our share handling regulations. However, holders of book-entry interest in our international shares through Euroclear and Clearstream may incur fees normally payable for the maintenance and operation of accounts in Euroclear or Clearstream. In addition, a Japanese securities firm or commercial bank acting as standing proxy will charge certain standard fees. See "Description of Our Common Stock—General."

Settlement Procedures—Secondary Marketing Trading

Secondary market sales of book-entry interests in our international shares held through Euroclear or Clearstream to purchasers of book-entry interests in the international shares through Euroclear and Clearstream will be conducted in accordance with the normal rules and operating procedures of Euroclear and Clearstream. Any transfer of interests in our international shares out of Euroclear and Clearstream will be effected in accordance with the rules of Euroclear or Clearstream, as applicable, and those of JASDEC, the Book-Entry Act and our share handling regulations. Secondary market sales and transfers of international shares held outside of Euroclear and Clearstream will also be conducted in accordance with our share handling regulations, any applicable rules of JASDEC, the Book-Entry Act and the rules of the Tokyo Stock Exchange applicable to listed securities. Settlement of transactions concerning shares listed on any stock exchanges in Japan will normally be effected on the third dealing day from and including the transaction date. Settlement in Japan is made through JASDEC as described above.

Daily Price Fluctuation Limits under the Rules of the Tokyo Stock Exchange

Share prices on the Tokyo Stock Exchange are determined on a real-time basis by the equilibrium between bids and offers. The Tokyo Stock Exchange sets daily price limits, which limit the maximum range of fluctuation within a single trading day. Daily price limits are set according to the previous day's closing price or special quote. Although transactions may continue at the upward and downward limit price if the limit price is reached on a particular trading day, no transactions may take place outside these limits. Consequently, an investor wishing to sell at a price above or below the relevant daily limit may not be able to sell his or her shares at such price on a particular trading day, or at all.

OFFERING AND SALE

Under the terms and subject to the conditions set forth in the international purchase agreement, dated the date of this offering circular, among us, the selling shareholder and the international managers named below, for whom Morgan Stanley & Co. International plc, Merrill Lynch International, Daiwa Capital Markets Europe Limited, J.P. Morgan Securities plc and Citigroup Global Markets Limited are acting together as the international representatives, the international managers have severally, and not jointly, agreed to purchase, and we and the selling shareholder have agreed to sell to the several international managers, the respective numbers of international shares set forth opposite the names of such international managers below:

Name of international manager	Number of international shares to be purchased
Morgan Stanley & Co. International plc	99,625,100
Merrill Lynch International	99,624,600
Daiwa Capital Markets Europe Limited	35,003,200
J.P. Morgan Securities plc	33,656,900
Citigroup Global Markets Limited	1,346,200
Total	269,256,000

Morgan Stanley & Co. International plc, BofA Securities Japan Co., Ltd., Daiwa Securities Co. Ltd. and JPMorgan Securities Japan Co., Ltd. are acting as joint global coordinators in connection with the global offering.

The international shares consist of 145,494,200 newly issued shares and 123,761,800 existing shares to be sold by the selling shareholder. Subject to certain conditions, the international managers will purchase the newly issued international shares at a purchase price of ¥1,151.70 per share and purchase the existing international shares from the selling shareholder at a purchase price of ¥1,165.79 per share, and initially offer the international shares at the offer price per share set forth on the cover page of this offering circular. After the initial offering of the international shares, the offer price and other selling terms may from time to time be varied by the joint global coordinators.

The aggregate difference between the offer price and each of the purchase prices set forth above will be distributed among the international managers in the manner agreed to by them. No other selling concession, management commission or underwriting commission will be payable by us or the selling shareholder with respect to the international offering.

The international managers are entitled to be released and discharged from their obligations under, and to terminate, the international purchase agreement in certain circumstances. If an international manager defaults, the international purchase agreement provides that, depending on the circumstances, the purchase commitments of the non-defaulting international managers may be increased or the international purchase agreement may be terminated. The international managers are offering the international shares subject to their receipt and acceptance of the international shares and subject to prior sale. The international purchase agreement provides that the obligations of the several international managers to pay for and accept delivery of the international shares offered by this offering circular are subject to confirmation of certain legal matters by the counsels to the international managers and to certain other conditions. The international managers reserve the right to withdraw, cancel or modify offers and to reject orders in whole or in part.

The international purchase agreement provides that we and the selling shareholder, severally and not jointly, will indemnify the international managers and their respective affiliates, selling agents and controlling persons against specified liabilities in connection with the offer and sale of the international shares, and will contribute to payments the international managers and their respective affiliates, selling agents and controlling persons may be required to make in respect of those liabilities.

The international shares are being (i) offered by the international managers in offshore transactions outside of Japan and outside of the United States in reliance on Regulation S under the Securities Act and (ii) placed inside the United States through U.S. broker dealer affiliates of the international managers to persons reasonably believed by them to be "qualified institutional buyers," as defined in Rule 144A under the Securities Act.

We have also entered into underwriting agreements as of the date of this offering circular with certain Japanese underwriters, for whom Daiwa Securities Co. Ltd., Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., BofA Securities Japan Co., Ltd., JPMorgan Securities Japan Co., Ltd. and Mizuho Securities Co., Ltd. are acting as Japanese joint lead managers, providing for the concurrent offering and sale of 67,314,000 shares of our common stock, including 36,373,600 newly issued shares to be sold by us and 30,940,400 existing shares to be sold by the selling shareholder, respectively, in connection with the Japanese offering.

The offer price for the international offering and the offer price for the Japanese offering are identical. The respective closings of the international offering pursuant to the international purchase agreement and the Japanese offering pursuant to the Japanese underwriting agreements are conditional on one another, unless the international representatives on behalf of the international managers or the Japanese joint lead managers on behalf of the Japanese underwriters, respectively, elect to waive such closing condition, in each case after consultation with the joint global coordinators.

For the purposes of the Japanese offering, we have filed a shelf registration statement and a securities notice, and have prepared a Japanese language prospectus pursuant to the FIEA, in each case including any amendments and supplements thereto.

It is expected that payment for the international shares to be sold by us will be made in Japanese yen for value on or about June 15, 2021 (Tokyo time) and payment for the international shares to be sold by the selling shareholder will be made in Japanese yen for value on or about June 16, 2021 (Tokyo time). It is expected that delivery of the international shares to international investors will be made through the book-entry facilities of JASDEC in Tokyo on or about June 16, 2021 (Tokyo time).

Over-allotment Options

In order to facilitate the international offering, the international managers may over-allot in the international offering up to an additional 26,925,600 shares of our common stock. We have granted the international managers an option to purchase up to an additional 14,549,400 newly issued shares of our common stock in connection with over-allotments, if any, in the international offering. In addition, INCJ has granted the international managers an option to purchase up to an additional 12,376,200 existing shares of our common stock in connection with over-allotments, if any, in the international offering. The options are exercisable upon notice given on or before June 11, 2021 by the international representatives. In connection therewith, the international representatives, on behalf of the international managers, may purchase up to 26,925,600 shares of our common stock in the open market in lieu of exercising all or part of the options. The options may be exercised solely for the purpose of covering over-allotments, if any, in connection with the international offering. If the options are exercised in whole or in part, the international managers will purchase, by the closing date of the international offering, additional shares in the same proportion to the total number of additional shares as their initial purchase commitment bears to the total number of initial shares, both in terms of the allocation among the international managers and in terms of the allocation between us and the selling shareholder.

In addition, in order to facilitate the Japanese offering, Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, may over-allot in the Japanese offering up to an additional 6,731,300 shares of our common stock. In connection with the offering of the over-allotted shares in the Japanese offering, Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, has entered into share borrowing agreements with INCJ, pursuant to which INCJ has agreed to lend Daiwa Securities Co. Ltd., an aggregate of 6,731,300 shares of our common stock, solely to cover such over-allotment, if any. We have granted Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, an option to purchase up to an additional 3,637,300 newly issued shares of our common stock in connection with over-allotments, if any, in the Japanese offering. In addition, INCJ has granted Daiwa Securities Co. Ltd., as representative of the Japanese underwriters, an option to purchase up to an additional 3,094,000 existing shares of our common stock in connection with over-allotments, if any, in the Japanese offering. During the period beginning on June 12, 2021 and ending on June 23, 2021, Daiwa Securities Co. Ltd. may purchase shares of our common stock in the open market in lieu of exercising all or part of the options mentioned in this paragraph. Daiwa Securities Co. Ltd. will exercise such options granted by INCJ and us in proportion to the ratio of the number of existing shares to be sold by the selling shareholder in the Japanese offering to the number of newly issued shares in the Japanese offering. All such transactions shall be conducted by Daiwa Securities Co. Ltd., in consultation with Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., BofA Securities Japan Co., Ltd., JPMorgan Securities Japan Co., Ltd. and Mizuho Securities Co., Ltd., in compliance with all applicable laws and regulations.

Any purchase by the international managers or Daiwa Securities Co. Ltd. of shares of our common stock in the open market in lieu of exercising all or part of the over-allotment options described above may cause the price of the shares of our common stock to be higher than the price that otherwise would exist in the open market absent such transactions. Neither we nor any of the joint global coordinators, international managers or Japanese underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the joint global coordinators, international managers or Japanese underwriters make any representation that the international managers or Daiwa Securities Co. Ltd., respectively, will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Intersyndicate Agreement

We have been advised by the joint global coordinators that to provide for the coordination of their activities, the international representatives, on behalf of themselves and the international managers, the Japanese joint lead managers, on behalf of themselves and the other Japanese underwriters, and the joint global coordinators have entered into an intersyndicate agreement which provides, among other things, that the international managers may, at the direction of the joint global coordinators, upon consultation with the international representatives and the Japanese joint lead managers, purchase shares of our common stock from the Japanese underwriters. To the extent there are sales of shares of our common stock among the international managers and the Japanese underwriters pursuant to the intersyndicate agreement and in compliance with any applicable laws, regulations and rules, the number of international shares initially available for sale by the international managers may be more, and the number of shares initially available for sale by the Japanese underwriters may be less, than the numbers appearing on the cover page of this offering circular.

Pursuant to the intersyndicate agreement, as part of the distribution of shares in the global offering and subject to certain exceptions, the international managers and the Japanese underwriters have agreed that (i) the international managers will not offer or sell, directly or indirectly, any such shares or distribute any offering circular or prospectus relating to such shares in Japan to, or for the account or benefit of, any person that is a national or resident of Japan or any entity organized under the laws of Japan (other than a branch located outside Japan) or any Japanese branch of an entity not organized under the laws of Japan and (ii) the Japanese underwriters will not offer or sell, directly or indirectly, any such shares or distribute any offering circular or prospectus relating to such shares outside Japan.

Stabilization

In addition to the purchases made in connection with the over-allotments as described above, in connection with the international offering, the designated international manager, or the Stabilizing Manager, or any other person acting for it, may, upon consultation with the other international representatives, over-allot the international shares or effect transactions with a view to supporting the market price of the international shares at a level higher than that which might otherwise prevail. However, there is no assurance that the Stabilizing Manager or any agent of the Stabilizing Manager will undertake stabilization action. Any stabilization action may begin on or after the date on which adequate public disclosure of the final terms of the offer of the international shares is made and, if begun, may be discontinued at any time but must end no later than 30 days after the date of the allotment of the international shares. Any stabilization action or over-allotment must be conducted in accordance with all applicable laws and rules.

In addition to stabilization and short position transactions in connection with the international offering as described above, Daiwa Securities Co. Ltd., on behalf of the Japanese underwriters, upon consultation with the Japanese joint lead managers, may engage in transactions in connection with the Japanese offering that maintain a stabilizing bid in relation to our shares on the Tokyo Stock Exchange at a level higher than that which might otherwise prevail, which may be at a price above the offer price for the global offering, in accordance with applicable Japanese laws and regulations. Daiwa Securities Co. Ltd. is not required to engage in these activities, and if these activities are commenced, they may be discontinued at any time. Any such stabilization in connection with the Japanese offering will be permitted only during the Japanese subscription period, which will be the two business days in Japan immediately following the date of this offering circular. All such transactions shall be conducted upon consultation with the Japanese joint lead managers.

Any transactions described above may have the effect of raising or maintaining the market price of our shares or preventing or retarding a decline in the market price of our shares. As a result, the price of our shares may be higher than the price that might otherwise exist in the open market.

Lock-up Agreements

In connection with the global offering, we have agreed with the joint global coordinators, for the benefit of each international manager and Japanese underwriter, that, during the period beginning on the date of this offering circular and ending on the date that is 180 days from and including the date of delivery of the shares in the global offering, i.e., December 12, 2021, we will not, without the prior written consent of the joint global coordinators:

(a) issue, offer, allot, transfer, pledge, lend, sell, or enter into any contract relating thereto, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise dispose of shares of our common stock or any other class of our capital stock or any securities convertible into, or exchangeable for, or that represent the right to acquire or receive, shares of our common stock or any other class of our capital stock, or consent to, or take any internal corporate action in order to consent to, any secondary offering of shares of our common stock by our shareholders;

(b) enter into any derivative transaction or any other transaction that transfers to any third party, in whole or in part, directly or indirectly, ownership (or any economic consequences thereof) of shares of our common stock or any other class of our capital stock or any securities convertible into, or exchangeable for, or that represent the right to acquire or receive, shares of our common stock or any other class of our capital stock (in each case regardless of whether any such transaction is to be effected by actual disposition, cash settlement or other settlement for economic value);

(c) announce or publicize the intention to enter into, or consent to, any of the prohibited actions described in (a) or (b) above; or

(d) permit any entities or persons acting at our direction to engage in any of the prohibited actions described in (a) through (c) above.

The restrictions above prohibit transactions undertaken with the intent to lead to or bring about, or transactions that could reasonably be expected to result in, sales or disposals of shares of our common stock or any other class of our capital stock, such as hedging or other transactions, including disposals of shares of our common stock or any other class of our capital stock undertaken by third parties. Prohibited hedging and other transactions include, but are not limited to, short sales and any purchase, sale or grant of rights (including, but not limited to, put options and call options) relating to shares of our common stock or any other class of our capital stock or securities relating to or that derive their primary value from shares of our common stock or any other class of our capital stock.

The restrictions described above will not apply to:

(a) the approval of, and the taking of any internal corporate action in order to approve of, the offering of newly issued shares and existing shares to be sold by the selling shareholder and offering by way of over-allotments as part of the global offering;

(b) the stock splits undertaken in accordance with Article 183 of the Companies Act and the allotment of shares without contribution undertaken in accordance with Article 185 of the Companies Act;

(c) the sale of any shares of our treasury stock upon request of any holder of shares constituting less than a full unit to make such holder's holding one full unit of shares, in accordance with paragraph 3 of Article 194 of the Companies Act;

(d) the sale of shares made in accordance with Article 234 or Article 235 of the Companies Act;

(e) the issuance or delivery of shares of our common stock upon the exercise of subscription rights to shares issued and outstanding as of the date of this offering circulars;

(f) the issuance of subscription rights to shares for executives and employees of Renesas and its affiliates as stock options and the issuance or delivery of shares of our common stock upon the exercise of such subscription rights to shares, provided that the aggregate number of shares of our common stock that may be issued or delivered assuming all of such rights are exercised and that may be issued or delivered based on the restricted stock unit and the performance share unit indicated in (g) below is not to exceed 1.62% of the total number of issued shares of Renesas as of March 31, 2021;

(g) the provision of the restricted stock unit and the performance share unit for executives and employees of Renesas and its affiliates and the issuance or delivery of shares of our common stock based on the restricted stock unit and the performance share unit, provided that the aggregate number of shares of our common stock that may be issued or delivered assuming all of the subscription rights indicated in (f) above are exercised and that may be issued or delivered based on such restricted stock unit and performance share unit is not to exceed 1.62% of the total number of issued shares of Renesas as of March 31, 2021; and

(h) the issuance and delivery of shares of our common stock based on the restricted stock unit and performance share unit outstanding as of the date of this offering circular.

Furthermore, INCJ has executed and delivered to the joint global coordinators a letter agreement pursuant to which INCJ has agreed with the joint global coordinators, for the benefit of each international manager and Japanese underwriter, that, during the period beginning on the date of this offering circular and ending on the date that is 180 days from and including the date of delivery of the shares in the global offering, i.e., December 12, 2021, not to, without the prior written consent of the joint global coordinators (which consent shall not be unreasonably withheld or delayed):

(a) issue, offer, allot, transfer, pledge, lend, sell, or enter into any contract relating thereto, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise dispose of shares of our common stock or any other class of our capital stock or any securities convertible into, or exchangeable for, or that represent the right to acquire or receive, shares of our common stock or any other class of our capital stock, including those relating to stock exchange, stock transfer and other organizational restructurings;

(b) enter into any derivative transaction or any other transaction that transfers to any third party, in whole or in part, directly or indirectly, ownership (or any economic consequences thereof) of shares of our common stock or any other class of our capital stock or any securities convertible into, or exchangeable for, or that represent the right to acquire or receive, shares of our common stock or any other class of our capital stock (in each case regardless of whether any such transaction is to be effected by actual disposition, cash settlement or other settlement for economic value);

(c) announce or publicize the intention to enter into, or consent to, any of the prohibited actions described in (a) or (b) above; or

(d) permit any entities or persons acting at the selling shareholder's direction to engage in any of the prohibited actions described in (a) through (c) above.

The restrictions above prohibit transactions undertaken with the intent to lead to or bring about, or transactions that could reasonably be expected to result in, sales or disposals of shares of our common stock or any other class of our capital stock, such as hedging or other transactions, including disposals of shares of our common stock or any other class of our capital stock undertaken by third parties other than the selling shareholder. Prohibited hedging and other transactions include, but are not limited to, short sales and any purchase, sale or grant of rights (including, but not limited to, put options and call options) relating to shares of our common stock or any other class of our capital stock or securities relating to or that derive their primary value from shares of our common stock or any other class of our capital stock.

The restrictions described above will not apply to:

(a) the sale of existing shares to be sold by the selling shareholder and sale by way of over-allotments as part of the global offering;

(b) the sale or transfer of shares of our common stock constituting less than a full unit of shares to us upon request of any holder of such shares in accordance with paragraph 1 of Article 192 of the Companies Act;

(c) the sale or transfer of shares of our common stock in response to any share repurchase we may conduct in accordance with Article 156, 160 or 165 of the Companies Act; and

(d) the lending of shares of our common stock to securities companies based on the share lending agreements which are or will be entered into between securities companies licensed by stock exchanges and under the Article 156-24 of the FIEA for such securities companies to select shares as lending and borrowing stocks.

In addition, there are certain other exceptions for INCJ for the offering and sale by INCJ of shares of our common stock as part of the global offering, and for the lending of shares of our common stock by INCJ to Daiwa Securities Co. Ltd. pursuant to the share borrowing agreements as of the date of this offering circular between INCJ and Daiwa Securities Co. Ltd. in connection with the over-allotments in the Japanese offering.

Selling Restrictions

General

No action has been or will be taken by us or the international managers that would permit a public offering of the shares, or possession or distribution of the offering circular, any amendment or supplement thereto, or any other offering or publicity material relating to the shares in any country or jurisdiction where, or in any circumstances in which, action for that purpose is required. Accordingly, the shares may not be offered or sold, directly or indirectly, and neither this offering circular nor any other offering or publicity material relating to the shares may be distributed or published, in or from any country or jurisdiction except under circumstances that will result in compliance with applicable laws and regulations.

United States

The international managers will purchase and sell shares as part of their distribution of international shares under the international purchase agreement at any time only in accordance with Regulation S or Rule 144A.

The international shares offered by this offering circular have not been and will not be registered under the Securities Act and may not be offered or sold within the United States (as defined in Regulation S), except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act. U.S. affiliates of the international managers may arrange for the sale of a portion of the international shares in the United States exclusively to persons reasonably believed by them to be qualified institutional buyers (as defined in Rule 144A) in reliance on the exemption from registration provided by Rule 144A. Each United States purchaser of international shares is hereby notified that the offer and sale of international shares to it is being made in reliance upon such exemption. The offering of the international shares outside the United States will be made in compliance with Regulation S.

In addition, until 40 days after the commencement of the offering, an offer or sale of international shares within the United States by a dealer (whether or not participating in the offering) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than pursuant to Rule 144A or pursuant to another exemption from registration under the Securities Act.

Japan

The international shares have not been and will not be registered under the FIEA. The international shares may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of a resident in Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any applicable laws, rules, regulations and governmental guidelines of Japan.

Member States of the European Economic Area

In relation to each Member State of the European Economic Area (each a "Relevant State"), no international shares have been offered or will be offered pursuant to this offering to the public in that Relevant State prior to the publication of a prospectus in relation to the international shares that has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of international shares may be made to the public in that Relevant State at any time:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors, as defined in the Prospectus Regulation), subject to obtaining the prior consent of the joint global coordinators for any such offer; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of international shares shall result in a requirement for us or any international manager to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any international shares or to whom any offer is made will be deemed to have represented, warranted and agreed to and with us and the international managers that it is a qualified investor within the meaning of Article 2(e) of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer of the international shares to the public" in relation to any international shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and the international shares to be offered so as to enable an investor to decide to purchase or subscribe for any international shares and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

United Kingdom

No international shares have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the international shares that either (i) has been approved by the Financial Conduct Authority, or (ii) is to be treated as if it had been approved by the Financial Conduct Authority in accordance with the transitional provisions in Article 74 (transitional provisions) of The Prospectus (Amendment etc.) (EU Exit) Regulations 2019/1234, except that offers of international shares may be made to the public in the United Kingdom at any time:

(a) to any legal entity which is a qualified investor as defined under Article 2 of the UK Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the joint global coordinators for any such offer; or

(c) in any other circumstances falling within Section 86 of the Financial Services and Markets Act 2000 (as amended, the "FSMA"),

provided that no such offer of the international shares shall result in a requirement for us or any international manager to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to the international shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any international shares to be offered so as to enable an investor to decide to purchase or subscribe for the international shares and the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

In addition, this offering circular may only be communicated or caused to be communicated to persons in the United Kingdom in circumstances where section 21(1) of the FSMA does not apply.

Canada

The international shares may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus

Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the Shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this offering circular (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts, or NI 33-105, the international managers are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The contents of this offering circular have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this offering circular, you should obtain independent professional advice.

The international shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (i) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) (the "SFO") and any rules made under the SFO, or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32, Laws of Hong Kong), or the CO, or which do not constitute an offer to the public within the meaning of the CO.

No advertisement, invitation or document relating to the international shares, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the international shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under the SFO, has been issued or in the possession of, or will be issued or in the possession of, any person for the purposes of issue.

Singapore

This offering circular has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this offering circular and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of international shares may not be circulated or distributed, nor may the international shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than

(i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA,

(ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA and (where applicable) Regulation 3 of the Securities and Futures (Classes of Investors) Regulations 2018; or

(iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the international shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the international shares pursuant to an offer made under Section 275 of the SFA except:

(1) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(2) where no consideration is or will be given for the transfer;

(3) where the transfer is by operation of law;

(4) as specified in Section 276(7) of the SFA; or

(5) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Australia

The provision of this offering circular to any person does not constitute an offer of international shares to that person or an invitation to that person to apply for international shares. Any such offer or invitation will only be extended to a person in Australia if that person is a wholesale client for the purposes of section 761G of the Corporations Act 2001 (Cth), or the Corporations Act, or is a sophisticated investor or is a professional investor for the purposes of sections 708(8) or 708(11) of the Corporations Act respectively, in each case a "wholesale investor."

This offering circular is intended to be provided only to wholesale investors. By retaining this offering circular, the recipient represents that the recipient is a wholesale investor.

This offering circular is not intended to be distributed or passed on, directly or indirectly, to any other class of persons in Australia.

No persons referred to in this offering circular hold an Australian financial services license.

The information in this offering circular is not personal advice and has been prepared without taking into account any investor's investment objectives, financial situation or particular needs. Before acting on the information the investor should consider its appropriateness having regard to their investment objectives, financial situation and needs and consider obtaining their own financial product advice from an independent person who is licensed by the Australian Securities and Investments Commission, or ASIC, to give such advice.

This offering circular has not been prepared specifically for Australian investors and does not purport to include all of the information required in a product disclosure statement, prospectus or other disclosure document under the Corporations Act. It:

- may contain references to dollar amounts which are not Australian dollars;
- may contain financial information which is not prepared in accordance with Australian law or practices;
- may not address risks associated with investment in foreign currency denominated investments; and
- does not address Australian tax issues.

If a person to whom international shares are issued, or an Investor, on-sells international shares within 12 months from their issue, the Investor will be required to lodge a prospectus with ASIC unless either:

(a) that sale is to another wholesale investor; or

(b) the sale offer is received outside Australia.

Each Investor acknowledges the above and, by applying for international shares, gives an undertaking not to sell those international shares in any circumstances other than those described in paragraphs (a) and (b) above for 12 months after the date of issue.

This offering circular is issued by us. We are not licensed in Australia to provide financial product advice in relation to the international shares. An investor in the international shares will not have cooling off rights.

This offering circular does not constitute a product disclosure statement, prospectus or other disclosure document under the Corporations Act and will not be lodged with ASIC.

Dubai International Financial Centre

This offering circular relates to an "Exempt Offer" in accordance with the Markets Rules of the Dubai Financial Services Authority, or the DFSA.

This offering circular is intended for distribution only to Professional Clients (as defined by the DFSA) who are not natural persons. It must not be delivered to, or relied on by, any other person.

The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved the international shares or this offering circular nor taken steps to verify the information set out in this offering circular, and has no responsibility for it.

The international shares and interests therein to which this offering circular relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the international shares and interests therein should conduct their own due diligence on the shares.

If you do not understand the contents of this offering circular you should consult an authorized financial adviser.

In relation to its use in the Dubai International Financial Centre, this offering circular is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the international shares may not be offered or sold directly or indirectly to the public in the Dubai International Financial Centre.

Republic of France

The international shares have not been and will not be offered or sold or caused to be offered or sold, directly or indirectly, to the public in France and neither this offering circular, nor any other offering material or information contained therein relating to the international shares, has been submitted to the approval of the French *Autorité des marchés financiers,* or the AMF, or of a competent authority of another Member State of the European Economic Area that would have notified its approval to the AMF under the Prospectus Regulation. Neither this offering circular, nor any other offering material or information contained therein relating to the international shares has been or will be released, issued or distributed or caused to be released, issued or distributed, directly or indirectly, to the public in France, or used in connection with any offer for subscription, exchange or sale of the international shares to the public in France.

Any such offers, sales and distributions may be made in France only to (i) qualified investors (*investisseurs qualifiés)* and/or (ii), a limited circle of investors (*cercle restreint d'investisseurs*) comprised of fewer than 150 natural or legal persons (other than qualified investors) acting for their own account; all as defined in, and in accordance with, the Prospectus Regulation and Articles L. 411-2, D. 411-4, D. 744-1, D. 754-1 and D. 764-1 of the French *Code monétaire et financier* and applicable regulations promulgated thereunder.

The international shares purchased or subscribed by investors listed above may be offered or resold, directly or indirectly, to the public in France, only in compliance with the conditions relating to public offers set forth in the Prospectus Regulation and Articles L. 411-1, L. 411-2, L. 412-1 and L. 621-8 to L. 621-8-3 of the French *Code monétaire et financier* and applicable regulations promulgated thereunder. Investors in France, and persons into whose possession offering materials referred to herein come, must inform themselves about, and observe any such restrictions.

Republic of Italy

This offering circular and the offering of the international shares have not been and will not be registered with, approved or subject to any formal review or clearance by the *Commissione Nazionale per le Società e la Borsa*, or CONSOB (the Italian securities market regulator), pursuant to Italian securities legislation. Accordingly, the international shares may not and will not be offered, sold, promoted, advertised or delivered, directly or indirectly, nor any copies of this offering circular or of any other document relating to the international shares may or will be distributed in the Republic of Italy, or Italy, other than:

(i) to qualified investors (*investitori qualificati)* pursuant to Article 1, paragraph 4(a), of the Regulation (EU) 2017/1129, as amended from time to time, or the Prospectus Regulation, Article 100 of Legislative Decree No. 58 of 24 February 1998, as amended from time to time, or the Financial Services Act, and Article 34-ter of CONSOB Regulation No. 11971 of 14 May 1999, as amended from time to time, or the Issuers Regulation;

(ii) to non-qualified investors, provided that the subscription of international shares amount to a total consideration of at least 100,000 euros per investor and per each separate offer, pursuant to Article 1, paragraph 4(d), of the Prospectus Regulation and Article 34-ter, letter (d), of the Issuer Regulation; or

(iii) in other circumstances where an exemption from the rules governing offers of securities to the public applies, pursuant to Article 1 of the Prospectus Regulation, Article 100 of the Financial Services Act and Article 34-ter, of the Issuers Regulation and any other applicable laws and regulations,

and provided further that any such offer, sale, promotion, advertising or delivery of the international shares or distribution of this offering circular, or any part thereof, or of any other document or material relating to the international shares in Italy is made in compliance with the Italian securities, tax, exchange control and other applicable laws and regulations, and, in particular, is made:

(a) by investment firms, banks or financial intermediaries permitted to conduct such activities in Italy in accordance with the Financial Services Act, Legislative Decree No. 385 of 1 September 1993, as amended from time to time, CONSOB Regulation No. 20307 of February 15, 2018, as amended from time to time and any other applicable laws and regulations; and

(b) in compliance with any other applicable laws and regulations and relevant limitations or procedural requirements (including reporting requirements where applicable) that CONSOB, the Bank of Italy and any other competent authority may impose upon the offer or sale of the shares.

Furthermore, resale of the international shares on the secondary market in Italy constitutes a distinct and autonomous offer to be made in compliance with the public offer and prospectus requirement rules provided under the Prospectus Regulation, the Financial Services Act and the Issuers Regulations, unless an exemption applies. In particular, pursuant to Article 100-bis of the Financial Services Act, where no exemption from the rules on public offerings applies, as indicated under (i), (ii) and (iii) above, subsequent distribution of the international shares on the secondary market in Italy to persons who are not qualified investors during the 12 months following an initial offering or placement in Italy or abroad reserved to qualified investors, triggers an offer to the public. In such circumstances, where no exemption from the rules on public offerings applies, failure to comply with the prospectus requirements provided under the Financial Services Act and the Issuers Regulation may result in the purchaser of the international shares acting outside of the course of its business or profession being entitled to declare the purchase of the international shares null and void and to claim damages from the authorized persons at whose premises the international shares were purchased.

South Korea

The international shares may not be offered, sold and delivered directly or indirectly, or offered or sold to any person for re-offering or re-sale, directly or indirectly, in Korea or to any resident of Korea, except pursuant to the applicable laws and regulations of Korea, including the Financial Investment Services and Capital Markets Act and the Foreign Exchange Transaction Law and the decrees and regulations thereunder. The international shares have not been registered with the Financial Services Commission of Korea for public offering in Korea.

Furthermore, the international shares may not be re-sold to Korean residents unless the purchaser of the international shares complies with all applicable regulatory requirements (including but not limited to government approval requirements under the Foreign Exchange Transaction Law and its subordinate decrees and regulations) in connection with their purchase.

People's Republic of China (excluding Hong Kong, Macau and Taiwan)

This offering circular may not be circulated or distributed in the People's Republic of China, or the PRC, and the international shares may not be offered or sold, directly or indirectly, to any resident of the PRC, or offered or sold to any person for re-offering or re-sale, directly or indirectly, to any resident of the PRC, except pursuant to applicable laws, rules and regulations of the PRC. For the purpose of this paragraph only, the PRC does not include Taiwan and the special administrative regions of Hong Kong and Macau.

Switzerland

This offering circular is not intended to constitute an offer or solicitation to purchase or invest in the international shares described herein. The international shares may not be publicly offered, directly or indirectly, in Switzerland within the meaning of the Swiss Financial Services Act, or FinSA, and no application has or will be made to admit the international shares to trading on any trading venue (exchange or multilateral trading facility) in Switzerland. Neither this offering circular nor any other offering or marketing material relating to the international shares constitutes a prospectus pursuant to the FinSA, and neither this offering circular nor any other offering or marketing material relating to the international shares may be publicly distributed or otherwise made publicly available in Switzerland.

United Arab Emirates (excluding the Dubai International Financial Centre)

The offering of the international shares has not been approved or licensed by the United Arab Emirates Central Bank, the UAE Securities and Commodities Authority, or the SCA, or any other relevant licensing authorities in the United Arab Emirates, or the UAE, and accordingly does not constitute a public offer of securities in the UAE in accordance with the commercial companies law, Federal Law No. 2 of 2015 Concerting Commercial Companies (as amended), SCA Resolution No. 3 R.M. of 2017 Concerning the Organization of Promotion and Introduction or otherwise. Accordingly, the international shares may not be offered to the public in the UAE.

This offering circular is strictly private and confidential and is being issued to a limited number of institutional and individual investors:

(a) who fall within with the exemptions set out in SCA Resolution No. 3 R.M. of 2017 (Qualified Investors excluding natural persons) and have confirmed the same;

(b) upon their request and confirmation that they understand that the international shares and the interests have not been approved or licensed by or registered with the UAE Central Bank, the SCA or any other relevant licensing authorities or governmental agencies in the UAE; and

(c) must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose.

Germany

This offering circular does not constitute a prospectus in accordance with the European Prospectus Regulation 2017/1129 and does therefore not allow any offer of the international shares to the public in the Federal Republic of Germany within the meaning of the European Prospectus Regulation. No action has been or will be taken in Germany that would permit an offering of the international shares to the public, or distribution of a prospectus or any other offering material relating to the international shares. In particular, no prospectus within the meaning of the European Prospectus Regulation or any other applicable laws in Germany has been or will be published in Germany, nor has this offering circular been filed with or approved by the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht)* for publication in Germany.

The international shares may not be offered, sold or delivered other than in accordance with the European Prospectus Regulation and any other applicable laws in Germany governing the issue, sale and offering of and any offering material relating to the international shares may only be used in Germany in compliance with the applicable rules and regulations in Germany.

Netherlands

The international shares are not and may not be offered, sold, transferred or delivered in the Netherlands, as part of their initial distribution or at any time thereafter, other than to persons or entities which are qualified investors (*gekwalificeerde beleggers*) within the meaning of article 1:1 of the Dutch Financial Supervision Act (*Wet op het financieel toezicht*) (which implements the definition of "qualified investors" in the Prospectus Regulation).

Ireland

The international shares may not and will not be offered, sold, promoted, advertised or delivered, directly or indirectly, nor any copies of this offering circular or any other document relating to the international shares may or will be distributed in the Ireland, nor will any action be taken in connection with the offering, otherwise than in conformity with: (i) the provisions of the European Union (Markets in Financial Instruments) Regulation, 2017, as amended, or the MiFiD II Regulations, including Regulation 5 (Requirement for Authorisation (and certain provisions concerning MTFs and OTFs)) thereof or any codes of conduct made under the MiFiD II Regulations and the provisions of the Investor Compensation Act 1998 (as amended); (ii) in conformity with the provisions of the Companies Act 2014, as amended, or the Irish Companies Act, the Irish Central Bank Acts 1942 to 2019 (as amended) and any codes of practice made under Section 117(1) of the Central Bank Act 1989 (as amended); (ii) the provisions of the Prospectus Regulation, the European Union (Prospectus) Regulations 2019 and any rules and guidance issued by the Central Bank under Section 1363 of the Irish Companies Act; and (iv) the provisions of the Market Abuse Regulation (EU) 596/2014 (as amended), the European Union (Market Abuse) Regulations 2016 (as amended) and any rules and guidance issued by the Central Bank under Section 1370 of the Irish Companies Act.

Malaysia

No approval, authorization or recognition from the Securities Commission of Malaysia, or the Commission, has been applied for or obtained for the offer for subscription or purchase or invitation to subscribe for or purchase of the international shares under the Capital Markets and Services Act 2007, or the CMSA, as the international shares will be offered in Malaysia only to (i) a closed end fund approved by the Commission; (ii) a holder of a Capital Markets Services License; (iii) a person who acquires the international shares, as principal, for a consideration of not less than RM250,000 (or its equivalent in foreign currencies) for each transaction; (iv) an individual whose total net personal assets or total net joint assets with his or her spouse exceeds RM3 million (or its equivalent in foreign currencies), excluding the value of the primary residence of the individual; (v) an individual who has a gross annual income exceeding RM300,000 (or its equivalent in foreign currencies) per annum in the preceding twelve months; (vi) an individual who, jointly with his or her spouse, has a gross annual income of RM400,000 (or its equivalent in foreign currencies), per annum in the preceding twelve months; (vii) a corporation with total net assets exceeding RM10 million (or its equivalent in a foreign currencies) based on the last audited accounts; (viii) a partnership with total net assets exceeding RM10 million (or its equivalent in foreign currencies); (ix) a bank licensee or insurance licensee as defined in the Labuan Financial Services and Securities Act 2010; (x) an Islamic bank licensee or takaful licensee as defined in the Labuan Financial Services and Securities Act 2010; and (xi) any other person as may be specified by the Commission, or each an Accredited Investor, through a holder of a Capital Markets Services License who carries on the business of dealing in securities. No prospectus or other offering material or document in connection with the offer for subscription or purchase or invitation to subscribe for or purchase of the international shares has been or will be registered with the Commission as a prospectus under the CMSA. A copy of this offering circular will be deposited with the Commission in accordance with Sections 229(4) and 230(4) of the CMSA for the purpose of the offer or sale, invitation for subscription or purchase of the international shares. Any such offer for subscription or purchase or invitation to subscribe for or purchase of the international shares in Malaysia is deemed to be an excluded offer or an excluded invitation(s), as the case may be, under Schedules 6 and 7 of the CMSA as the international shares will be offered to persons who fall within the exemptions specified in Schedules 6 and 7 of the CMSA, or each an Excluded Person. Accordingly, this offering circular and any other document or material in connection with the offer for subscription or purchase or invitation to subscribe for or purchase of the international shares may not be circulated or distributed, nor may the international shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Malaysia other than an Accredited Investor and an Excluded Person.

Taiwan

The international shares have not been and will not be registered or filed with, or approved by, the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations of Taiwan and may not be sold, issued or offered within the territory of Taiwan through a public offering or in circumstances which constitute an offer within the meaning of the Securities and Exchange Act or relevant laws and regulations of Taiwan that requires a registration, filing or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer or sell the international shares within the territory of Taiwan through a public offering or in such an offering that require registration, filing or approval of the Financial Supervisory Commission of Taiwan.

Stamp Taxes and Other Charges

Purchasers of international shares sold by the international managers may be required to pay stamp taxes and other charges in accordance with the laws and practice of the country of purchase in addition to the offer price.

Other Relationships

Certain of the international managers, the Japanese underwriters or their respective affiliates have provided, and may in the future provide, various financial advisory and investment and commercial banking services for us and our affiliates, as well as the selling shareholder and its respective affiliates, in the ordinary course of their business, for which they have received or may receive, as the case may be, customary compensation.

In the ordinary course of their business activities, the international managers, the Japanese underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The international managers, the Japanese underwriters and their respective affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments. Interests may evolve out of these transactions that could potentially conflict with your interests.

In addition, Morgan Stanley & Co. International plc is a subsidiary of Morgan Stanley. Mitsubishi UFJ Financial Group, Inc., or MUFG, holds approximately 20.36% of the common shares in Morgan Stanley. MUFG Bank, Ltd. is a subsidiary of MUFG, and is acting as arranger, payment agent, security agent and lender under the Bridge Facilities Agreement and receives fees in connection with such roles.

In addition, J.P. Morgan Securities plc, which conducts its U.K. investment banking business as J.P. Morgan Cazenove, is acting as financial advisor to Dialog in connection with the Dialog Acquisition.

LEGAL MATTERS

Certain legal matters with respect to the international offering will be passed upon for us by Simpson Thacher & Bartlett LLP, in respect of New York State and U.S. federal securities law, and Nagashima Ohno & Tsunematsu in respect of Japanese law. Certain legal matters with respect to the international offering will be passed upon for the international managers by Skadden, Arps, Slate, Meagher & Flom LLP, in respect of New York State and U.S. federal securities law, and Nishimura & Asahi, in respect to Japanese law.

INDEPENDENT AUDITORS

Our consolidated financial statements as of and for the fiscal years ended December 31, 2019 and 2020 included in this offering circular have been audited by PricewaterhouseCoopers Aarata LLC, the independent auditor in Japan, as set forth in their report appearing elsewhere in this offering circular.

With respect to our unaudited condensed quarterly consolidated financial statements as of and for the three months ended March 31, 2021 included in this offering circular, PricewaterhouseCoopers Aarata LLC reported that they have applied limited procedures in accordance with professional standards for a review of such quarterly financial statements generally accepted in Japan. However, their separate report dated May 14, 2021 appearing in this offering circular states that they did not audit and they do not express an opinion on these unaudited quarterly condensed consolidated financial statements. Accordingly, the degree of reliance on their report on such unaudited condensed quarterly consolidated financial statements should be restricted in light of the limited nature of the review procedures applied.

The consolidated financial statements of Dialog as of and for the fiscal year ended December 31, 2020 included in this offering circular have been audited by Deloitte LLP, the independent auditor in the United Kingdom, as stated in their report appearing herein.

With respect to Dialog's unaudited quarterly consolidated financial statements as of and for the three months ended April 2, 2021 included in this offering circular, Deloitte LLP has applied limited procedures in accordance with International Standard on Review Engagements 2410. However, they did not audit and they do not express an opinion on such unaudited quarterly condensed consolidated financial statements. Accordingly, the degree of reliance on their review on such information should be restricted in light of the limited nature of the review procedures applied.

CHANGE OF AUDITORS

The appointment of Ernst & Young ShinNihon LLC, our prior independent auditor, terminated on March 20, 2019, in accordance with the terms of the agreement between us and Ernst & Young ShinNihon LLC. At our annual shareholders' meeting on March 20, 2019, our shareholders approved the appointment of PricewaterhouseCoopers Aarata LLC as our new independent auditor to audit our financial statements starting with our fiscal year beginning January 1, 2019.

INDEX TO THE FINANCIAL STATEMENTS

Annual Consolidated Financial Statements of Renesas Electronics Corporation

Condensed Quarterly Consolidated Financial Statements of Renesas Electronics Corporation (unaudited)

Annual Consolidated Financial Statements of Dialog

Quarterly Condensed Consolidated Financial Statements of Dialog (unaudited)

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Renesas Electronics Corporation

Opinion

We have audited the consolidated financial statements of Renesas Electronics Corporation (the Company) and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2020, and consolidated statement of profit or loss, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2020, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Japan, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

1. We draw attention to Note 38 to the consolidated financial statements "Subsequent Events", Acquisition of Stock of Dialog Semiconductor Plc, which describes that on February 8, 2021, the Company has reached an agreement with Dialog Semiconductor Plc whereby the Company will acquire Dialog Semiconductor Plc. In addition, to procure the funds for the acquisition, the Company entered into a loan agreement and filed the shelf registration statement for the issuance of new shares.
2. We draw attention to Note 38 to the consolidated financial statements "Subsequent Events", Fire outbreak in a wholly-owned manufacturing subsidiary, which describes that on March 19, 2021, a fire broke out at a manufacturing line in the N3 Building (300mm line) of Naka Factory (located in Hitachinaka, Ibaraki Prefecture) of Renesas Semiconductor Manufacturing Co., Ltd, a wholly-owned manufacturing subsidiary of the Company. Due to this fire, certain property, plant and equipment such as machinery and equipment and inventories such as work in progress were damaged. At this moment, it is difficult to make reasonable estimates for the financial effects of the fire, including the loss on property, plant and equipment and inventories, restoration costs and effect on sales from the halted production, as well as insurance recovery for such damages.

   Our opinion is not modified in respect of these matters.

Responsibilities of Management and The Corporate Auditors and Board of Corporate Auditors for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern, and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Corporate Auditors and Board of Corporate Auditors are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with auditing standards generally accepted in Japan will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.
As part of an audit in accordance with auditing standards generally accepted in Japan, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, while the purpose of the consolidated financial statement audit is not to express an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate whether the presentation and disclosures of the consolidated financial statements are in accordance with International Financial Reporting Standards, the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Corporate Auditors and Board of Corporate Auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Corporate Auditors and Board of Corporate Auditors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Interest required to be disclosed by the Certified Public Accountants Act of Japan

Our firm and its designated engagement partners do not have any interest in the Group which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

/s/ Hiroyuki Sawayama

Hiroyuki Sawayama

Designated Engagement Partner
Certified Public Accountant

/s/ Takeaki Ishibashi

Takeaki Ishibashi

Designated Engagement Partner
Certified Public Accountant

/s/ Hitoshi Kondo

Hitoshi Kondo
Designated Engagement Partner
Certified Public Accountant

/s/ PricewaterhouseCoopers Aarata LLC

Tokyo, Japan
March 31, 2021

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1. Consolidated Financial Statements

(1) Consolidated Financial Statements

(i) Consolidated Statement of Financial Position

(In millions of yen)

	Notes	As of December 31, 2019	As of December 31, 2020
Assets			
Current assets			
Cash and cash equivalents	8	146,468	219,786
Trade and other receivables	9, 33	84,459	82,318
Inventories	10	90,785	89,761
Other current financial assets	16, 33	468	605
Income taxes receivable		4,438	2,190
Other current assets	11	7,344	8,162
Total current assets		333,962	402,822
Non-current assets			
Property, plant and equipment	12, 14, 15	232,579	187,354
Goodwill	7, 13, 15	625,030	590,459
Intangible assets	13, 15	414,582	364,764
Other non-current financial assets	16, 33	9,995	18,101
Deferred tax assets	17	46,050	40,600
Other non-current assets	11	5,950	4,885
Total non-current assets		1,334,186	1,206,163
Total assets		1,668,148	1,608,985

(In millions of yen)

	Notes	As of December 31, 2019	As of December 31, 2020
Liabilities and equity			
Liabilities			
Current liabilities			
Trade and other payables	18, 33	100,187	114,235
Bonds and borrowings	19, 33	93,182	93,181
Other current financial liabilities	20, 33	4,362	4,036
Income taxes payable		7,861	10,337
Provisions	21	7,521	6,383
Other current liabilities	11	55,528	58,873
Total current liabilities		268,641	287,045
Non-current liabilities			
Trade and other payables	18, 33	845	25,177
Bonds and borrowings	19, 33	678,577	586,563
Other non-current financial liabilities	20, 33	10,093	10,241
Income taxes payable		4,499	4,084
Retirement benefit liability	22	29,572	30,012
Provisions	21	3,860	3,033
Deferred tax liabilities	17	43,257	38,680
Other non-current liabilities	11	4,400	4,489
Total non-current liabilities		775,103	702,279
Total liabilities		1,043,744	989,324
Equity			
Share capital	23	22,213	28,971
Capital surplus	23	201,588	208,253
Retained earnings	23	403,857	449,975
Treasury shares	23	(11)	(11)
Other components of equity		(6,192)	(70,487)
Total equity attributable to owners of parent		621,455	616,701
Non-controlling interests		2,949	2,960
Total equity		624,404	619,661
Total liabilities and equity		1,668,148	1,608,985

(ii) Consolidated Statement of Profit or Loss and Consolidated Statement of Comprehensive Income

Consolidated Statement of Profit or Loss

(In millions of yen)

	Notes	The year ended December 31, 2019	The year ended December 31, 2020
Continuing operations			
Revenue	6, 24	718,243	715,673
Cost of sales	37	(423,451)	(379,984)
Gross profit		294,792	335,689
Selling, general and administrative expenses	25, 37	(273,454)	(266,268)
Other income	26	2,302	4,036
Other expenses	27	(17,377)	(8,315)
Operating profit		6,263	65,142
Finance income	28	2,186	7,623
Finance costs	28	(8,774)	(7,549)
Profit (loss) before tax		(325)	65,216
Income tax expense	17	(5,903)	(19,490)
Profit (loss) from continuing operations		(6,228)	45,726
Discontinued operations			
Profit after tax from discontinued operations		—	—
Profit (loss)		(6,228)	45,726
Profit (loss) attributable to			
Owners of parent		(6,317)	45,626
Non-controlling interests		89	100
Profit (loss)		(6,228)	45,726
Earnings (loss) per share	30		
Basic earnings (loss) per share (yen)			
Continuing operations		(3.73)	26.54
Discontinued operations		—	—
Total basic earnings (loss) per share		(3.73)	26.54
Diluted earnings (loss) per share (yen)			
Continuing operations		(3.73)	25.97
Discontinued operations		—	—
Total diluted earnings (loss) per share		(3.73)	25.97

Consolidated Statement of Comprehensive Income

(In millions of yen)

	Notes	The year ended December 31, 2019	The year ended December 31, 2020
Profit (loss)		(6,228)	45,726
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Remeasurements of defined benefit plans		(3,203)	(334)
Equity instruments measured at fair value through other comprehensive income		(177)	(330)
Total of items that will not be reclassified to profit or loss		(3,380)	(664)
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation of foreign operations		(18,033)	(64,290)
Cash flow hedges		5,614	—
Total of items that may be reclassified subsequently to profit or loss		(12,419)	(64,290)
Total other comprehensive income	29	(15,799)	(64,954)
Total comprehensive income		(22,027)	(19,228)
Comprehensive income attributable to			
Owners of parent		(22,108)	(19,239)
Non-controlling interests		81	11
Total comprehensive income		(22,027)	(19,228)

(iii) Consolidated Statement of Changes in Equity
The year ended December 31, 2019

(In millions of yen)

	Notes	Equity attributable to owners of parent						
						Other components of equity		
		Share capital	Capital surplus	Retained earnings	Treasury shares	Share acquisition rights	Remeasurements of defined benefit plans	Equity instruments measured at fair value through other comprehensive income
Balance as of January 1, 2019		10,699	190,074	410,652	(11)	5,165	—	(1,072)
Effects of changes in accounting policies		—	—	1,192	—	—	—	—
Balance as of January 1, 2019 after changes in accounting policies		10,699	190,074	411,844	(11)	5,165	—	(1,072)
Profit (loss)		—	—	(6,317)	—	—	—	—
Other comprehensive income		—	—	—	—	—	(3,203)	(177)
Total comprehensive income		—	—	(6,317)	—	—	(3,203)	(177)
Issuance of new shares	23	11,514	12,097	—	—	—	—	—
Share-based payment transactions	32	—	—	—	—	11,956	—	—
Transfer to retained earnings		—	(583)	(1,670)	—	(1,068)	3,203	118
Reclassification to non-financial assets		—	—	—	—	—	—	—
Total transactions with owners		11,514	11,514	(1,670)	—	10,888	3,203	118
Balance as of December 31, 2019		22,213	201,588	403,857	(11)	16,053	—	(1,131)

	Notes	Equity attributable to owners of parent				Non-controlling interests	Total equity
		Other components of equity					
		Exchange differences on translation of foreign operations	Cash flow hedges	Total	Total equity attributable to owners of parent		
Balance as of January 1, 2019		(3,089)	(14,318)	(13,314)	598,100	2,868	600,968
Effects of changes in accounting policies		—	—	—	1,192	—	1,192
Balance as of January 1, 2019 after changes in accounting policies		(3,089)	(14,318)	(13,314)	599,292	2,868	602,160
Profit (loss)		—	—	—	(6,317)	89	(6,228)
Other comprehensive income		(18,025)	5,614	(15,791)	(15,791)	(8)	(15,799)
Total comprehensive income		(18,025)	5,614	(15,791)	(22,108)	81	(22,027)
Issuance of new shares	23	—	—	—	23,611	—	23,611
Share-based payment transactions	32	—	—	11,956	11,956	—	11,956
Transfer to retained earnings		—	—	2,253	—	—	—
Reclassification to non-financial assets		—	8,704	8,704	8,704	—	8,704
Total transactions with owners		—	8,704	22,913	44,271	—	44,271
Balance as of December 31, 2019		(21,114)	—	(6,192)	621,455	2,949	624,404

The year ended December 31, 2020

(In millions of yen)

	Notes	Equity attributable to owners of parent						
						Other components of equity		
		Share capital	Capital surplus	Retained earnings	Treasury shares	Share acquisition rights	Remeasurements of defined benefit plans	Equity instruments measured at fair value through other comprehensive income
Balance as of January 1, 2020		22,213	201,588	403,857	(11)	16,053	—	(1,131)
Profit		—	—	45,626	—	—	—	—
Other comprehensive income		—	—	—	—	—	(334)	(330)
Total comprehensive income		—	—	45,626	—	—	(334)	(330)
Issuance of new shares	23	6,758	6,665	—	—	—	—	—
Share-based payment transactions	32	—	—	—	—	1,062	—	—
Transfer to retained earnings		—	—	492	—	(1,156)	334	330
Total transactions with owners		6,758	6,665	492	—	(94)	334	330
Balance as of December 31, 2020		28,971	208,253	449,975	(11)	15,959	—	(1,131)

	Notes	Equity attributable to owners of parent				Non-controlling interests	Total equity
		Other components of equity					
		Exchange differences on translation of foreign operations	Cash flow hedges	Total	Total equity attributable to owners of parent		
Balance as of January 1, 2020		(21,114)	—	(6,192)	621,455	2,949	624,404
Profit		—	—	—	45,626	100	45,726
Other comprehensive income		(64,201)	—	(64,865)	(64,865)	(89)	(64,954)
Total comprehensive income		(64,201)	—	(64,865)	(19,239)	11	(19,228)
Issuance of new shares	23	—	—	—	13,423	—	13,423
Share-based payment transactions	32	—	—	1,062	1,062	—	1,062
Transfer to retained earnings		—	—	(492)	—	—	—
Total transactions with owners		—	—	570	14,485	—	14,485
Balance as of December 31, 2020		(85,315)	—	(70,487)	616,701	2,960	619,661

(iv) Consolidated Statement of Cash Flows

(In millions of yen)

	Notes	The year ended December 31, 2019	The year ended December 31, 2020
Cash flows from operating activities			
Profit (loss) before tax		(325)	65,216
Depreciation and amortization		148,026	141,527
Impairment losses		2,256	2,070
Finance income and finance costs		5,927	6,994
Share-based payment expenses		11,896	14,564
Loss (gain) on sales of property, plant and equipment, and intangible assets		(515)	(717)
Decrease (increase) in inventories		44,549	79
Decrease (increase) in trade and other receivables		9,882	1,228
Increase (decrease) in trade and other payables		(36)	10,192
Increase (decrease) in retirement benefit liability		(3,044)	194
Increase (decrease) in provisions		411	(1,713)
Increase (decrease) in other current liabilities		(11,609)	3,675
Other		(962)	(10,035)
Subtotal		206,456	233,274
Interest received		1,326	307
Dividends received		238	240
Income taxes paid		(6,060)	(9,932)
Net cash flows from operating activities		201,960	223,889
Cash flows from investing activities			
Purchase of property, plant and equipment		(38,284)	(22,261)
Proceeds from sales of property, plant and equipment		755	960
Purchase of intangible assets		(18,084)	(15,925)
Purchase of other financial assets		(545)	(568)
Proceeds from sales of other financial assets		1,431	430
Purchase of shares of subsidiaries	7	(685,831)	—
Other		(1,604)	(2,799)
Net cash flows from investing activities		(742,162)	(40,163)
Cash flows from financing activities			
Net increase (decrease) in short-term borrowings	31	(45,000)	—
Proceeds from long-term borrowings	31	847,000	—
Repayments of long-term borrowings	31	(217,645)	(93,295)
Repayments of lease liabilities	31	(5,726)	(4,840)
Interest paid		(12,796)	(6,264)
Payments for retirement by purchase of bonds	31	(65,409)	—
Other		42	(71)
Net cash flows from financing activities		500,466	(104,470)
Effect of exchange rate changes on cash and cash equivalents		(2,616)	(5,938)
Net increase (decrease) in cash and cash equivalents		(42,352)	73,318
Cash and cash equivalents at beginning of the period	8	188,820	146,468
Cash and cash equivalents at end of the period	8	146,468	219,786

Notes to Consolidated Financial Statements

1. Reporting Entity

Renesas Electronics Corporation (hereafter "the Company") is a public company established under the Companies Act of Japan and domiciled in Japan. The accompanying consolidated financial statements of the Company and its consolidated subsidiaries (hereafter "the Group") are composed of the Company, its subsidiaries and interests of the Group in its associates, with December 31, 2020 as the closing date. The Group engages in research, design, development, manufacturing, sales and services related to various kinds of semiconductors as a manufacturer specializing in semiconductors. For details of the Group's major business, please refer to "Note 6. Business Segments."

The consolidated financial statements for the year ended December 31, 2020 were approved on March 31, 2021 by Hidetoshi Shibata, President and CEO, and Shuhei Shinkai, Executive Vice President, Member of the Board and CFO.

2. Basis for Preparation

(1) Compliance with IFRS

Because the Group meets the requirements for "Specified Companies Complying with Designated International Accounting Standards" stated in Article 1-2 of Ordinance on Consolidated Financial Statements, the Group has adopted the provisions of Article 93 of the Ordinance. The consolidated financial statements of the Group have been prepared in accordance with IFRS.

(2) Basis of measurement

The consolidated financial statements of the Group have been prepared based on the accounting policies separately described in "Note 3. Significant Accounting Policies." Assets and liabilities are measured at a historical cost basis unless otherwise stated.

(3) Functional currency and presentation currency

The consolidated financial statements are presented in Japanese yen (rounded to the nearest million yen), which is the functional currency of the Company.

(4) Changes in accounting policy (Changes of the classification of expenses)

Following the acquisition of Integrated Device Technology, Inc. (hereafter "IDT") and the absorption type merger of Renesas Electronics America Inc. by IDT, the Company began to integrate its business processes and Information Technology (hereafter "IT") systems from January 1, 2020 for the launch of "One Renesas" operations. In conjunction with the integration, the Company has also decided to reclassify the expenses in order to better present the financial position and results of operations of the Group.

Royalty expenses paid as technology licensing fees were recorded in selling, general and administrative expenses in the past. However, because the percentage of royalty expenses linked to sales revenue has been increasing in recent years, the Company has decided to divide the royalty expenses into those linked to sales revenue and those not linked to sales revenue, and from the first quarter of the current fiscal year, the portion linked to sales revenue has been classified into cost of sales and inventories as manufacturing costs. In addition, the costs incurred by the department at the head office, which oversees IT infrastructure and company-wide system operations, were previously recorded in selling, general and administrative expenses. However, from the first quarter of the current fiscal year, the Company has changed its method of accounting for the IT costs to be recorded in cost of sales and inventories as manufacturing costs as well as research and development expenses (selling, general and administrative expenses) to reflect the nature of the expenses, as it is more appropriate to allocate those costs to the beneficiaries who actually use the infrastructure and systems.

The change in accounting policy has been applied retrospectively to the consolidated financial statements for the year ended December 31, 2019. As a result of this change, compared with the accounting policy prior to retrospective application, cost of sales for the year ended December 31, 2019 increased by 8,136 million yen, selling, general and administrative expenses decreased by 7,554 million yen and operating profit and profit before tax decreased by 582 million yen, respectively.

Reflecting the cumulative effect on equity at the beginning of the year ended December 31, 2019, the beginning balance of retained earnings in the consolidated statement of changes in equity after retroactive application increased by 1,192 million yen. This accounting change has no material impact on earnings per share.

3. Significant Accounting Policies

The significant accounting policies of the Group are as follows and are applied to all the periods presented in the consolidated financial statements.

(1) Basis of consolidation

A. Subsidiaries

Subsidiaries are entities controlled by the Group. Control refers to a case in which the Group has power over an entity, is exposed to variable returns from involvement with the entity and has the ability to affect those returns through its power over the entity.

The financial statements of subsidiaries are included in the consolidated financial statements from the date when control is obtained until the date when control is lost. In the event that the Group disposes of some of its ownership interest in a subsidiary that does not result in a loss of control, the change in ownership interest of the Group is accounted for as an equity transaction, and the difference between the adjustment of non-controlling interests and the fair value of the consideration is directly recognized in equity as equity attributable to owners of parent.

If the closing dates of a subsidiary and that of the consolidated financial statements are different, financial statements prepared with a provisional closing date, which is same as that of consolidated financial statements, are used.

B. Associates

Associates are entities over which the Group has a significant influence over the decisions on financial and operating policies but does not have control. Investments in associates are accounted for using the equity method.

Investments in associates are initially recognized at cost. Ownership interests of the Group in profit or loss and other comprehensive income of the associate from the date when the Group obtains significant influence until the date when the Group loses significant influence are recognized as changes in the amount of investments in associates.

C. Transactions eliminated on consolidation

Inter-company balances of receivables and payables, transactions and unrealized gains or losses resulting from inter-company transactions are eliminated on consolidation.

(2) Business combinations

Business combinations are accounted for using the acquisition method. Consideration transferred in a business combination is measured as the sum of the acquisition-date fair value of the assets transferred, liabilities assumed, and equity instruments issued by the Company in exchange for control over the acquiree.

Any excess of the consideration for acquisition, the non-controlling interests in the acquiree and the fair value of assets of the acquiree that the acquirer previously held over the net amount of identifiable assets and liabilities as of the date of acquisition is recognized as goodwill. Conversely, if the consideration for acquisition is lower than the net amount of identifiable assets and liabilities as of the date of acquisition, it is immediately recognized in profit or loss. Acquisition-related costs are recognized in profit or loss. The additional acquisition of non-controlling interests after obtaining control is accounted for as an equity transaction, and no corresponding goodwill is recognized.

If the initial accounting treatment of a business combination is not completed by the end of the fiscal year when the business combination took place, provisional amounts for the items for which accounting is incomplete are reported, and such provisional amounts that were recognized as of the date of acquisition are adjusted retrospectively during the measurement period within one year from the date of acquisition.

(3) Foreign currency translation

A. Functional currency and presentation currency

The financial statements of the Group entities are prepared in their respective functional currency. The consolidated financial statements of the Group are presented in Japanese yen, which is the functional currency of the Company.

B. Foreign currency transactions

Foreign currency transactions are translated into the functional currency at the spot exchange rate or a rate approximate to the spot exchange rate on the date of the transaction. Monetary items denominated in a foreign currency at the end of the reporting period are translated into the functional currency using the closing rate, while non-monetary items denominated in a foreign currency that are measured at historical cost are translated using the exchange rate in effect on the date of the initial transaction, and those that are measured at fair value are translated using the exchange rate in effect on the date when the fair value was calculated.

Exchange differences from translation or settlement are recognized in profit or loss during the period when they arise. However, exchange differences arising from equity instruments and cash flow hedges measured through other comprehensive income are recognized in other comprehensive income.

C. Foreign operations

In preparing the consolidated financial statements, the assets and liabilities of a foreign operation are translated into Japanese yen at the exchange rate as of the closing date of the consolidated financial statements, and profit or loss and cash flows of the foreign operation are translated into Japanese yen at the exchange rate on the date of the transaction or the average exchange rate for the period that is approximate to the exchange rate on the date of the transaction. Exchange differences are recognized in other comprehensive income, and the cumulative amount thereof is recognized in other components of equity.

On disposal of the entire ownership interest in a foreign operation or part of the interest that results in a loss of control or significant influence, the exchange differences of the foreign operation that were recognized in other comprehensive income and accumulated in equity are reclassified from equity to profit or loss when the related gains or losses on disposal are recognized.

(4) Financial instruments

A. Financial assets other than derivatives

(a) Initial recognition and measurement

Trade and other receivables are initially recognized at their transaction price on that date, and all other financial assets are initially recognized on the date of the transaction when the Company becomes the contracting party to the financial assets.

At the time of initial recognition, financial assets are classified as financial assets measured at amortized cost or financial assets measured at fair value.

(i) Financial assets measured at amortized cost

Financial assets are classified as financial assets measured at amortized cost if both of the following conditions are met or otherwise classified as financial assets measured at fair value.

- Assets are held within a business model that aims to hold assets to collect contractual cash flows.
- The contract terms of the financial assets give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

(ii) Financial assets measured at fair value through other comprehensive income

- Debt instruments measured at fair value through other comprehensive income

  If both of the following conditions are met, financial assets are classified as debt instruments measured at fair value through other comprehensive income.

  - Assets are held within a business model whose objective is achieved by both the collection and sale of contractual cash flows.
  - The contract terms of the financial assets give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

- Equity instruments measured at fair value through other comprehensive income

  Of financial assets measured at amortized cost, or financial assets other than debt instruments measured at fair value through other comprehensive income, when an irrevocable election at the time of initial recognition is made, subsequent changes in fair value are recognized in other comprehensive income and such equity instruments are classified as financial assets measured at fair value through other comprehensive income.

(iii) Financial assets measured at fair value through profit or loss

Financial assets that do not meet the criteria for either (i) or (ii) above are classified into financial assets measured at fair value through profit or loss.

Financial assets are recognized initially at fair value plus, in the case of financial assets not recorded at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial assets. Transaction costs for financial assets measured at fair value through profit or loss are recognized in profit or loss.

(b) Subsequent measurement

After the initial recognition, financial assets are measured as follows according to their classification.

(i) Financial assets measured at amortized cost

Financial assets measured at amortized cost are measured at amortized cost using the effective interest method.

(ii) Financial assets measured at fair value through other comprehensive income

- Debt instruments measured at fair value through other comprehensive income

  The amount of changes in the fair value of debt instruments measured at fair value through other comprehensive income is recognized in other comprehensive income, except for impairment gains or losses and foreign exchange gain or loss, until the financial assets are derecognized. If the financial assets are derecognized, gains or losses accumulated in other comprehensive income are reclassified to profit or loss.

- Equations instruments measured at fair value through other comprehensive income

  The amount of changes in the fair value of equity instruments measured at fair value through other comprehensive income is recognized in other comprehensive income. If the financial assets are derecognized, or if the fair value has declined significantly, gains or losses accumulated in other comprehensive income are directly reclassified to retained earnings. Dividend income from the financial assets is recognized as finance income in profit or loss.

(iii) Financial assets measured at fair value through profit or loss

Financial assets measured at fair value through profit or loss are measured at fair value after the initial recognition, and changes in fair value are recognized in profit or loss.

(c) Impairment of financial assets

For impairment of financial assets measured at amortized cost, the Group recognizes an allowance for expected credit losses of financial assets. On each reporting date, the Group assesses whether the credit losses of the financial instruments have increased significantly subsequent to the initial recognition.

If the credit losses of financial instruments have not increased significantly after the initial recognition, the loss allowance of the financial instruments is measured at the amount of 12-month expected credit losses, and if the credit losses of the financial instruments have increased significantly after the initial recognition, the loss allowance of the financial instruments is measured at the amount of lifetime expected credit losses.

However, for trade receivables, etc., the loss allowance is always measured at the amount of lifetime expected credit losses.

Expected credit losses of the financial instruments are estimated in a way that reflects:

- An unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes
- The time value of money
- Reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions

Changes in the amount of the measurement are recognized in profit or loss.

(d) Derecognition

The Group derecognizes financial assets if the contractual rights to the cash flows from the financial assets expire, or if substantially all risks and rewards associated with ownership of the financial assets are transferred as a result of assigning the contractual right to receive cash flows from the financial assets.

B. Financial liabilities other than derivatives

(a) Initial recognition and measurement

At the time of initial recognition, financial liabilities are classified as financial liabilities measured at amortized cost or financial liabilities measured at fair value through profit or loss. Although all financial liabilities are initially measured at fair value, financial liabilities measured at amortized cost are measured at an amount obtained by deducting directly attributable transaction costs.

(b) Subsequent measurement

(i) Financial liabilities measured at amortized cost

Financial liabilities measured at amortized cost are measured at amortized cost using the effective interest method.

(ii) Financial liabilities measured at fair value through profit or loss

Financial liabilities measured at fair value through profit or loss are measured at fair value after the initial recognition, and the changes are recognized in profit or loss.

(c) Derecognition

The Group derecognizes financial liabilities when they are extinguished, for example when then obligations specified in the contract are discharged, cancelled or expired.

C. Derivatives and hedge accounting

The Group holds derivative financial instruments for the purpose of hedging the risk of exchange rate fluctuations, etc. The Group has a policy of not conducting speculative derivative transactions.

Derivatives are initially recognized at fair value, and related transaction costs are recognized in profit or loss when they are incurred. After the initial recognition, derivatives are remeasured at fair value, and changes in the fair value are accounted for as described below, depending on whether the derivative financial instruments that are designated as hedging instruments meet the requirements for hedge accounting. The Group designates the derivatives that meet the requirements for hedge accounting as hedging instruments and applies hedge accounting. In addition, at the inception of a hedge, the Group formally documents the risk management objective, the relationship between hedging instruments and the hedged items, along with strategies when executing hedging transactions, and the method of assessing hedge effectiveness.

(i) Cash flow hedges

Of gains or losses from hedging instruments, the effective portion of the hedge is recognized in other comprehensive income, and the ineffective portion is recognized in profit or loss.

The amount of hedging instruments that is recorded in other comprehensive income is reclassified to profit or loss at the time when the underlying hedged transactions affect profit or loss. If the hedged items give rise to the recognition of non-financial assets or non-financial liabilities, the amount that is recognized in other comprehensive income is reclassified as an adjustment to the initial carrying amount of non-financial assets or non-financial liabilities.

For cash flow hedges other than the above, the amount is reclassified from other comprehensive income to profit or loss in the same period or periods during which the hedged expected future cash flows affect profit or loss. However, if the accumulated amount is a loss and if all or part of the loss is not expected to be recovered in the future, the amount that is not expected to be recovered is immediately reclassified to profit or loss.

When hedge accounting is terminated, this accumulated amount remains in other comprehensive income until the expected future cash flows occur, and if the forecast transaction is no longer expected to occur, this amount is immediately reclassified to profit or loss.

(ii) Derivatives that do not meet requirements for hedge accounting

Changes in fair value are recognized in profit or loss.

(5) Cash and cash equivalents

Cash and cash equivalents consist of cash on hand, deposits that can be withdrawn at any time and short-term investments with a maturity of 3 months or less when purchased that can be easily converted to cash and are subject to an insignificant risk of changes in value.

(6) Inventories

The acquisition cost of inventories comprises all costs of purchase, costs of conversion and all other costs incurred in bringing the inventories to their present location and condition.

After the initial recognition, inventories are measured at the lower of cost and net realizable value, but if cost exceeds net realizable value, the inventories are written down to net realizable value. The net realizable value is calculated by deducting the estimated costs of completion and the estimated costs necessary to make the sale from the estimated selling price in the ordinary course of business.

The cost is also calculated using the following methods:

Merchandise and finished goods

Custom-made products: Specific identification method

Mass products: Average method

Work in progress

Custom-made products: Specific identification method

Mass products: Average method

Raw materials and supplies: Mainly average method

(7) Property, plant and equipment (other than leased assets)

The acquisition cost of property, plant and equipment includes costs directly related to the acquisition of assets, dismantling, disposal and restoration costs and borrowing costs that meet the requirements for capitalization.

The cost model is used in the measurement of property, plant and equipment, and they are presented at the carrying value obtained by deducting accumulated depreciation and accumulated impairment losses from the acquisition cost.

Except for land and construction in progress, the acquisition cost of each asset after deducting the residual value is depreciated over the estimated useful life using the straight-line method.

The estimated useful life, the residual value and the depreciation method are reviewed at the end of each fiscal year, and any changes are applied to the period when the estimated are changed and future periods prospectively as a change in the accounting estimate. The impact of the change of these estimates is recognized in the period when the estimates are changed and future periods.

The estimated useful lives of major assets are as follows.

Buildings and structures	10 to 45 years
Machinery, equipment and vehicles	2 to 8 years
Tools, furniture and fixtures	2 to 10 years

(8) Goodwill and intangible assets

A. Goodwill

The measurement of goodwill at the time of initial recognition is as stated in "(2) Business combinations." After initial recognition, goodwill is not amortized and is measured at cost less any accumulated impairment losses.

Goodwill is allocated to each of the acquirer's cash-generating units that are expected to benefit from the synergies of the business combination, and an impairment test is performed for the cash-generating units to which goodwill was allocated at a certain time each fiscal year and whenever there is an indication of impairment. Impairment losses on goodwill are recognized in profit or loss and are not reversed in a subsequent period.

B. Intangible assets

The cost model is used for intangible assets, and they are presented at cost less any accumulated amortization and accumulated impairment losses.

(a) Intangible assets acquired separately

Intangible assets acquired separately are measured at cost at the time of initial recognition.

(b) Intangible assets acquired in a business combination

For intangible assets acquired in a business combination, their acquisition cost is measured at fair value as of the date of acquisition. Intangible assets acquired in a business combination are comprised primarily of developed technology, customer relationships, and in-process research and development.

(Developed technology)

Intangible assets that represent future excess earnings power expected to arise from the technology and that have been already developed as of the date of acquisition with the acquiree are recognized as Developed technology.

(Customer relationships)

Intangible assets related to future excess earnings power expected to arise from the existing customers as of the date of acquisition with the acquiree are recognized as Customer relationships.

(In-process research and development)

Intangible assets in an intermediate stage of identifiable research and development assets meeting the asset requirements are recognized as in-process research and development.

The details for intangible assets acquired in a business combination, see "Note 13. Goodwill and Intangible Assets."

(c) Internally-generated intangible assets (Capitalized development cost)

For internally-generated intangible assets, the expenditure is recorded as an expense, except for development costs that meet the following requirements for capitalization:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale;
- The intention of an entity to complete the intangible asset and use or sell it;
- The ability to use or sell the intangible asset;
- A method for the intangible asset to generate probable future economic benefits,
- The availability of adequate technical, financial and other resources necessary for completing the development of the intangible asset and using or selling it; and
- The ability to measure the expenditure attributable to the intangible asset during its development reliably

  These internally generated intangible assets are amortized using the straight-line method from the time when they are provided for use in business operations based on estimated useful life (5 years) for which they are expected to provide net cash inflows. Expenditure on research and development that does not meet the requirements for capitalization above is recognized in profit or loss at the time of occurrence.

Intangible assets with finite useful lives are amortized over their respective estimated useful life using the straight-line method, and an impairment test is performed if any indications of impairment exist. For intangible assets with finite useful lives, their useful lives and amortization method are reviewed at the end of each fiscal year. A change in the useful life or the amortization method is applied prospectively as a change in accounting estimate.

Commercial software products are mainly amortized using a method based on the expected sales volume over the expected sales period (3 years or less), and software for internal use is mainly amortized using the straight-line method based on the expected available period (5 years) for internal use. Technical assets are amortized using the straight-line method based on the available period (12 years or less) in business activities.

Intangible assets with indefinite useful life and intangible assets that are not yet available for use are not amortized, and an impairment test is performed at a certain time each fiscal year or whenever any indication of impairment exists.

(9) Leases

A. Overall

(a) Identification of a lease

At inception of a contract, the Group assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Group reviews the following to assess whether a contract conveys the right to control the use of an identified asset.

(i)The use of the identified asset in a contract is directed.

(ii)The lessee has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use.

(iii)The lessee has the right to direct the use of an asset. Also, in case that the determination of how and for what purpose the asset is used are predetermined, if applicable to any of the following, it is determined that the lessee has the right to direct the use of an asset.

- The lessee has the right to operate the asset.
- The lessee designed the asset in a way that predetermines how and for what purpose the asset will be used.

(b) Lease term

The lease term is defined as the non-cancellable period for which a lessee has the right to use an underlying asset, together with both:

- periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option; and
- periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option.

B. Leases as Lessee

(a) Separable components of a contract

The Group allocates the consideration in contract for a building lease to lease and non-lease components on the basis of the relative stand-alone price of each lease component. In addition, the Group elects not to separate non-lease components from lease components, and instead accounts for each lease component and any associated non-lease components as a single lease component for the lease other than a building lease.

(b) Right-of-use assets

The Group recognizes the right-of-use assets and the lease liabilities at the date of initial application. The right-of-use assets are measured initially at cost. This cost is calculated by deducting any lease incentives received from the sum of the amounts of the initial measurement of the lease liabilities, any lease payments made at or before the commencement date, any initial direct costs and an estimate of costs to be incurred in dismantling and removing the underlying assets, restoring the underlying asset or restoring the site on which it is located. After the commencement date, the right-of-use asset is measured using a cost model by deducting any accumulated depreciation and any accumulated impairment losses from the cost.

The right-of-use assets are depreciated using the straight-line method over the period which is the earlier of the useful life of the underlying asset or the lease term. If it is reasonably certain that the Group will exercise a purchase option, depreciation is based on the useful life of the underlying asset.

(c) Lease liabilities

Lease liabilities are measured initially at the present value of unpaid lease payments discounted using the interest rate implicit in the lease. If the interest rate implicit in the lease cannot be readily determined, the Group’s incremental borrowing rate is used. The Group typically uses our incremental borrowing rate as the discount rate.

The lease payments in the measurement of lease liabilities includes the fixed payments, the amount of payments for the lease in any optional period if it is considered to be reasonable certain to exercise an extension option, and the payments of penalties for terminating the lease if the lease term reflects the lessee exercising an option to terminate the lease.

If there is a change in future lease payments resulting from a change in an index or rate, there is a change in the amounts expected to be payable under a residual value guarantee, or there is a change in determining whether purchase, extension and termination option is reasonably certain to exercise, lease liabilities are remeasured.

When lease liabilities are remeasured, the carrying amount of the right-of-use assets is adjusted or the remaining remeasurement is recognized in profit or loss if the carrying amount of the right-of-use assets is reduced to zero.

(d) Short-term leases within 12 months and leases of low-value assets

The Group elects not to recognize right-of-use assets and lease liabilities for short-term leases within 12 months and leases of low-value assets including IT equipment and recognizes these lease payments as expenses over the lease term using the straight-line method.

(10) Impairment of non-financial assets

The Group determines whether there is any indication that an asset (except for inventories, deferred tax assets and retirement benefit assets) may be impaired each fiscal year, and if such indication exists, an impairment test is performed. However, for goodwill or intangible assets with indefinite useful life or that are not yet available for use, an impairment test is performed at a certain time each fiscal year and when indicators of impairment are identified. or when any signs of impairment are identified.

In the impairment test, a recoverable amount is estimated, and the carrying amount and the recoverable amount are compared. The recoverable amount of assets or cash-generating units is calculated at the higher of the value in use and the fair value less costs of disposal. The value in use is calculated by discounting the estimated future cash flows to the present value, using the pre-tax discount rate that reflects the time value of money and risks specific to the asset.

If the recoverable amount of assets or cash-generating units is lower than the carrying amount as a result of the impairment test, an impairment loss is recognized. When the impairment loss of a cash-generating unit including goodwill is recognized, an allocation is made first to reduce the carrying amount of goodwill that is allocated to the cash-generating unit, and then an allocation is made to proportionally reduce the carrying amount of other assets in the cash-generating unit.

The impairment loss is reversed if there is any indication that the impairment loss recognized in a prior period may no longer exist or may have decreased and if the estimated recoverable amount exceeds the carrying amount. The upper limit of the reversal shall not exceed the carrying amount that would have been determined had no impairment loss been recognized in prior years, net of depreciation or amortization. The impairment loss on goodwill is not reversed.

(11) Provisions

The Group recognizes a provision if the Group has assumed a legal or constructive obligation as a result of a past event, if it is probable that an outflow of economic benefits will be required to settle the obligation and if a reliable estimate can be made of the amount of the obligation.

If the time value of the money of the provision is significant, the estimated future cash flows are discounted to the present value using a pre-tax discount rate that reflects the time value of the money and risks specific to the liability. The unwinding of the discount amount due to the passage of time are recognized as a finance cost.

(12) Levies

For levies that are an outflow of resources embodying economic benefits required by the government to the Group in accordance with laws and regulations, an expected payment is recognized as a liability when the obligation event that triggers the payment of levies prescribed by laws and regulations occurs.

(13) Employee benefits

A. Short-term employee benefits

A short-term employee benefit is an employee benefit that will be settled within 12 months from the end of the fiscal year in which the employee renders the related service, and the Group recognizes an amount expected to be paid in exchange for the services rendered during a certain accounting period. Short-term employee benefits in the Group include bonuses and benefits related to paid leave.

The expected costs of employee benefits related to accumulating paid leave are recognized when an employee renders the service that will increase the entitlement to future paid leave. In addition, the Group measures the expected cost of accumulating paid leave as an additional amount that the Group is expected to pay as a result of the unused entitlement that has accumulated as of the end of the fiscal year.

Bonuses are recognized as a liability if the Group has a legal or constructive obligation to pay as a result of the provision of service by the employee in the past and if the obligation can be estimated reliably.

B. Post-employment benefits

For post-employment benefit plans, the Group has adopted defined benefit plans and defined contribution plans.

(a) Defined contribution plans

Contributions to defined contribution plans are recognized as an expense when they are incurred unless they are included in inventories or property, plant and equipment. If contributions already paid exceed contributions due for services provided before the end of the fiscal year, the Group recognizes the excess as an asset to the extent to which the prepayment becomes the reduction of future payments or a future refund.

(b) Defined benefit plans

The net amount of assets or liabilities of the defined benefit plan is the amount obtained by deducting the fair value of the plan assets (including the upper limit of the assets and adjustments to minimum funding requirements, if necessary) from the present value of defined benefit obligations, and it is recognized in the consolidated financial statements as an asset or a liability. The defined benefit obligations are calculated using the projected unit credit method, and the present value of defined benefit obligations is calculated by applying a discount rate to the expected payment amount in the future. The discount rate is calculated based on market yields at the end of the reporting period on high quality corporate bonds corresponding to the discount period which is determined based on the period until the future expected benefit payment date in each reporting period.

Service costs and net interest expense for the net amount of assets or liabilities related to the defined benefit plans are recognized in profit or loss.

Actuarial gains or losses and fluctuations in the return on the plan assets excluding the portion included in the net interest expense and change in the impact of the asset ceiling are recognized in other comprehensive income as “Remeasurements of defined benefit plans” in the corresponding period and are immediately transferred from other components of equity to retained earnings. Past service costs are recognized in profit or loss when the plan is revised or curtailed, or when related restructuring costs or termination benefits are recognized, whichever is earlier.

C. Other long-term employee benefits

As long-term employee benefit plans other than post-employment benefits, the Group has a special leave and a reward plan based on the number of service years. The obligations regarding other long-term employee benefits are measured at the amount obtained by discounting the estimated amount of future benefits that the employees have earned as consideration for services rendered in the previous and current fiscal years to the present value.

(14) Government grants

Government grants are recognized at fair value when there is reasonable assurance that the Group complies with the required conditions and that the grants will be received. Grants related to revenue are recognized in profit or loss. Grants recognized as profit or loss are deducted from the corresponding expenses when they are directly based on the incurred expenses. Grants received based on other conditions are shown in other income.

(15) Treasury shares

When treasury shares are acquired, the amount of the consideration paid, including directly attributable transaction costs, is recognized at cost and deducted from equity. If treasury shares are sold, the consideration received is recognized as an increase in equity, and the difference between the carrying amount and the consideration received is recognized in the capital surplus account.

(16) Share-based payments

The Group has adopted an equity-settled share-based payment plan as an incentive plan for directors (excluding outside directors), senior vice presidents and employees.

Share-based payments (hereafter “stock options”) are estimated at fair value on the grant date and recognized as an expense over the vesting period, taking into account the number of stock options that are expected to eventually vest, and the same amount is recognized as an increase in equity. The fair value of granted options is calculated by taking the terms and conditions of the options into account. If it is determined that the number of stock options that will be vested will differ from the prior estimate due to subsequent information, the estimate of the number of stock options that will be vested is revised as necessary.

(17) Revenue recognition

The Group recognizes revenue based on the following five-step model.

Step 1: Identify the contract with a customer
Step 2: Identify the performance obligations in the contract
Step 3: Determine the transaction price
Step 4: Allocate the transaction price to the performance obligations in the contract
Step 5: Recognize revenue when the entity satisfies a performance obligation

The Group engages in research, design, development, manufacturing, sales and services related to various kinds of semiconductors as a manufacturer specializing in semiconductors. Revenue is recognized mainly when the goods are delivered as the ownership of these goods has been transferred to the customer and the performance obligations are satisfied at the time of delivery.

Also, revenue is measured at the fair value of the consideration received after deducting discounts, rebates and returns.

(18) Finance income and Finance costs

Finance income consists of dividend income, interest income, foreign exchange gain, gains on sales of financial assets, gains on hedging financial instruments that are recognized in profit or loss, and the transfer of amounts previously recognized in other comprehensive income. Interest income is recognized at the time of occurrence using the effective interest method. Dividend income is usually recognized on the date when the Group's right to receive payment is established.

Finance costs consist of interest expenses for corporate bonds, borrowings and interest expenses for lease liabilities, foreign exchange loss, losses on sales of financial assets, losses from hedging financial instruments that are recognized in profit or loss, and the transfer of amounts previously recognized in other comprehensive income. Acquisitions or construction of qualifying assets, or borrowing costs not directly attributable to the production, are recognized at the time of occurrence using the effective interest method. Lease payments are allocated to finance costs and the repayment portion of the liability balance, and finance costs are allocated over the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

(19) Income taxes

Current taxes and deferred taxes are presented as income tax expense in the consolidated statement of profit or loss, except for those related to business combinations and items that are recognized in other comprehensive income or that are directly recognized in equity.

Current taxes and deferred taxes related to items that are recognized in other comprehensive income are recognized in other comprehensive income.

A. Current taxes

Current taxes are measured at the amount paid to tax authorities or the amount expected to be refunded from tax authorities. The tax rates and the tax law used for the calculation of the tax amount are those established or substantively established by the closing date.

B. Deferred taxes

Deferred taxes are calculated based on temporary differences between the tax base amount and the carrying amount for accounting purposes of assets and liabilities at the end of the fiscal year. Deferred tax assets are recognized for deductible temporary differences, unused tax credits and unused tax losses are expected to arise to the extent to which it is probable that taxable profits will be available against which they can be utilized, and deferred tax liabilities are recognized for taxable temporary differences, in principle.

Neither a deferred tax asset nor a deferred tax liability is recognized for the following temporary differences:

- Temporary difference arising from the initial recognition of goodwill
- Temporary difference arising from the initial recognition of an asset and a liability arising from a transaction (excluding business combination transactions) that does not have an impact on accounting profits and taxable profits
- A case where the timing for eliminating a taxable temporary difference for an investment in a subsidiary or an associate and an interest in the arrangement of joint control can be controlled and where it is probable that the difference will not be eliminated in the foreseeable future
- A case where it is improbable that a deductible temporary difference for an investment in a subsidiary or an associate and an interest in the arrangement of joint control will be eliminated in the foreseeable future, or a case where it is improbable that a taxable profit that will be available for the temporary difference will be earned

Deferred tax assets and liabilities are measured at a tax rate (and based on tax law) that is expected to be applied in the period when assets are realized or liabilities are settled based on the statutory tax rate (and based on tax law) that is established or substantively established by the closing date.

Deferred tax assets and deferred tax liabilities are offset if the Group has the legally enforceable right to offset current tax assets and current tax liabilities, and if any of the following cases applies:

- Income tax expense is imposed on the same taxable entity by the same tax authority
- Although income tax expense is imposed on different taxable entities, these taxable entities intend to settle current tax assets and current tax liabilities on a net basis or intend to settle current tax liabilities at the same time as realizing current tax assets.

The carrying amount of deferred tax assets is reviewed at the end of each fiscal year. If it becomes improbable that taxable profits sufficient to realize part or all of the benefits of deferred tax assets will be earned, the carrying amount of deferred tax assets is reduced to that extent. In addition, the amount of the write-down is reversed to the extent to which it becomes probable that sufficient taxable profits will be earned.

The Group recognizes tax assets and liabilities at a reasonably estimated amount where there is an uncertain tax position.

(20) Earnings per share

Basic earnings per share are calculated by dividing profit (loss) attributable to owners (ordinary shareholders) of the parent by the weighted average number of ordinary shares outstanding, net of treasury shares, during each fiscal year.

Diluted basic earnings per share are calculated, adjusted for the effects of all dilutive potential ordinary shares.

(21) Non-current assets held for sale and discontinued operations

A. Non-current assets held for sale

For assets or asset groups that are not in continuing use and for which recovery through sale is expected, that are highly likely to be sold within one year, and that the execution of sales plan is confirmed by management and can be sold in their current condition, assets held for sale and liabilities directly related to assets held for sale are classified into disposal groups separately from other assets and liabilities and recorded in the consolidated statement of financial position.

Non-current assets classified as assets held for sale are measured at the lower of the carrying amount and the fair value after deducting the costs for sale. Assets classified as assets held for sale are not depreciated or amortized.

B. Discontinued operations

A component of an entity that has either been disposed of or is classified as held for sale is recognized as a discontinued operation if any of the following applies:

- A separate major line of business or geographical area of operations;
- Part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations; or
- A subsidiary acquired exclusively with a view to resale.

If an operation is classified as a discontinued operation, the consolidated statement of profit or loss and the consolidated statement of comprehensive income for a comparative period are restated on the assumption that the operation was discontinued on the commencement date of the comparative period.

4. Significant Accounting Estimates and Judgments

In preparing the consolidated financial statements, management of the Group makes judgments, accounting estimates and assumptions that could have an impact on the application of accounting policies and the reporting amounts of assets, liabilities, revenue and expenses. These estimates and assumptions are based on the best judgment of management, taking into account various factors that are deemed reasonable on the closing date in light of past experience and available information. However, figures based on these estimates and assumptions may differ from the actual results due to their nature.

Estimates and underlying assumptions are reviewed continuously. The impact of the review of these estimates is recognized in the period when the estimates are revised and future periods.

The Group reflects the impact of COVID-19 to estimates and assumptions (impairment test of goodwill and collectability of deferred tax assets, etc.), to a reasonable extent based on available information.

These estimates and assumptions may be affected depending on the future situations of the spread of COVID-19.

Estimates and assumptions that could have a significant impact to the consolidated financial statements are as follows.

(1) Impairment of non-financial assets

The Group performs an impairment test for non-financial assets (excluding inventories, deferred tax assets and retirement benefit asset) if there is any indication that the recoverable amount will be less than the carrying amount.

However, for goodwill or intangible assets with indefinite useful life or that are not yet available for use, an impairment test is performed at a certain time each fiscal year and when any signs of impairment exist.

The impairment test is performed by comparing the carrying amount and the recoverable amount of the assets, and if the recoverable amount falls below the carrying amount, an impairment loss is recorded. The recoverable amount is calculated mainly using the discounted cash flow model, where certain assumptions, including, but not limited to, the useful life of the asset, future cash flows, sales revenue, gross margin, discount rate, and long-term growth rate, are made. These assumptions are determined based on the best estimates and judgments of management but could be influenced by fluctuations in uncertain future economic conditions. If a revision becomes necessary, it could have a significant impact on the amounts that will be recognized in the consolidated financial statements of subsequent periods.

The calculation method of the recoverable amount is stated in "Note 15. Impairment of Non-financial Assets."

(2) Post-employment benefits

The Group has a variety of post-employment benefit plans, including a defined benefit plan.

The present value of the defined benefit obligation of each plan and related service costs are calculated based on actuarial assumptions. For the actuarial assumptions, estimates and judgments on a range of variables such as the discount rate are required.

The actuarial assumptions are determined based on the best estimates and judgments of management but could be affected by fluctuations in uncertain future economic conditions. If a revision becomes necessary, it could have a significant impact on the amounts that will be recognized in the consolidated financial statements of subsequent periods.

These actuarial assumptions and related sensitivities are stated in "Note 22. Employee Benefits."

(3) Provisions

The Group records multiple provisions in the consolidated statement of financial position, including the provision for product warranties and asset retirement obligations, among others.

These provisions are recorded based on the best estimate of expenditure required for the settlement of the obligations, considering risks and uncertainties related to the obligations on the closing date.

The amount of expenditure required for the settlement of the obligations is calculated by comprehensively considering results that could arise in the future, but it could be affected by the occurrence of unforeseeable events and changes in the situation. If the actual amount of expenditure differs from the estimate, it could have a significant impact on amounts recognized in the consolidated financial statements of subsequent periods.

The nature and amounts of provisions are stated in "Note 21. Provisions."

(4) Recoverability of deferred tax assets

When deferred tax assets are recognized, the time and amount of taxable profits that will be earned in the future based on a business plan are estimated and calculated based on judgment of the possibility that taxable profits will arise.

Because the timing and amount of taxable profits are affected by the future business performance of the Group, if the actual timing and amount differ from the estimate, it could have a significant impact on the amounts recognized in the consolidated financial statements of subsequent periods.

Details and amounts of deferred tax assets are stated in "Note 17. Income Tax."

(5) Inventories

Inventories are measured at cost, but if the net realizable value at the end of the fiscal year falls below the acquisition cost, inventories are measured at the net realizable value, and the difference from the acquisition cost is recognized in the cost of sales, in principle. For slow moving inventory that is outside of the operating cycle process, the net realizable value is calculated reflecting the future demand and market trends. If the net realizable value declines significantly due to the greater-than-expected deterioration of the market environment, a loss could arise.

(6) Measurement method of the fair value of financial instruments

When the Group evaluates the fair value of certain financial instruments, the Group uses valuation techniques that use inputs that are not observable in the market. These unobservable inputs could be affected by fluctuations in uncertain future economic conditions, and if a revision becomes necessary, it could have a significant impact on the consolidated financial statements in subsequent periods.

The details and amounts of the fair value of financial instruments are stated in "Note 3. Significant Accounting Policies, (4) Financial instruments" and "Note 33. Financial Instruments."

(7) Income taxes

The Group recognizes tax assets and liabilities at a reasonably estimated amount based on the interpretation of tax laws where there is an uncertain tax position. Deferred taxes of the Group include liabilities related to an uncertain tax position. Tax effects of assets and liabilities explained above are calculated using the expected value method. Estimates are based on the best estimate at the moment. However, differences from the estimates could have a significant impact on the consolidated financial statements in subsequent periods depending on the actual results. For details, please refer to "Note 17. Income Taxes."

5. Standards and Interpretations Not Yet Adopted

Of the new standards and interpretations that were newly issued or revised as of the date of the approval of the consolidated financial statements, the major standards and interpretations that the Group has not yet adopted as of December 31, 2020 are as follows:

IFRS 17 "Insurance Contract"

IFRS 17 "Insurance Contract" was issued as replacement for IFRS4 "Insurance Contracts." The Group will apply the standard from January 1, 2023. The Group has not yet calculated an impact on the consolidated financial statements by adoption of the standards.

6. Business Segments

(1) Overview of reportable segments

The Group's reportable segments are components of the Group for which separate financial information is available that is evaluated regularly by the Board of Directors to determine the allocation of management resources and assess performance.

The Group consists of "Automotive Business" and "Industrial/Infrastructure/IoT Business" and those are the Group's reportable segments. The Automotive business includes the product categories "Automotive control," comprising semiconductor devices for controlling automobile engines and bodies, and "Automotive information," comprising of semiconductor devices used in sensing systems for detecting environments inside and outside the vehicle as well as automotive information devices such as IVI (in-vehicle infotainment) and instrument panels used to give various information to the driver of the vehicle. The Group mainly supplies microcontrollers (MCUs), system-on-chips (SoCs), analog semiconductor devices and power semiconductor devices in each of these categories. The Industrial/Infrastructure/IoT Business includes the product categories "Industrial", "Infrastructure" and "IoT" which support the smart society. The Group mainly supplies MCUs and SoCs in each of these categories. Additionally, commissioned development and manufacturing from the Group's design and manufacturing subsidiaries are categorized as "Other."

(2) Information on reportable segments

The accounting treatment for reportable segments is same as described in "Note 3. Significant Accounting Policies." The internal indicators which are used by management when making decisions have been adjusted by non-recurring items specified by the Group and other adjustments following a certain set of rules from operating profit in accordance with IFRS. Segment profit or loss is calculated by deducting "Cost of Sale", "General, Selling and Administrative Expenses" and "Other Expenses" from "Revenue" and adding "Other Income." The Group's Executive Officers assess the performance after eliminating intragroup transactions, and therefore, there is no transfer between reportable segments.

Information on reportable segments is as follows.

The year ended December 31, 2019 (In millions of yen)

	Reportable Segments: Automotive	Reportable Segments: Industrial/ Infrastructure/ IoT	Other	Adjustments (Note 1)	Total	Adjustments (Note 2)	Consolidation basis
Revenue from external customers	371,145	329,705	17,393	—	718,243	—	718,243
Segment profit or loss	30,984	59,063	1,037	1,398	92,482	(86,219)	6,263
Finance income							2,186
Finance costs							(8,774)
Loss before tax							(325)
(Other adjustments) Depreciation and amortization	59,191	41,373	(160)	—	100,404	47,622	148,026

The year ended December 31, 2020 (In millions of yen)

	Reportable Segments: Automotive	Reportable Segments: Industrial/ Infrastructure/ IoT	Other	Adjustments (Note 1)	Total	Adjustments (Note 2)	Consolidation basis
Revenue from external customers	341,001	363,609	11,063	—	715,673	—	715,673
Segment profit or loss	48,356	89,702	1,177	(1,697)	137,538	(72,396)	65,142
Finance income							7,623
Finance costs							(7,549)
Profit before tax							65,216
(Other adjustments) Depreciation and amortization	46,174	39,299	236	—	85,709	55,818	141,527

(Note) 1. Reportable Segment's allocation of non-recurring items and other specified adjustments deducted or adjusted following a certain set of rules.
2. Non-recurring items and other specified adjustments deducted or adjusted following a certain set of rules.

(3) Information on products and services

Information on products and services is the same with information on reportable segments and therefore, omitted from this section.

(4) Information on regions and countries

The components of revenue and non-current assets from external customers by region and country are as follows.

a. Revenue from external customers

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Japan	261,663	241,186
China	150,486	168,548
Asia (Excluding China and Japan)	117,959	126,614
Europe	118,990	111,908
North America	66,228	65,048
Others	2,917	2,369
Total	718,243	715,673

(Note) Revenues are categorized into the country or region based on the location of the customers.

b. Non-current assets

Non-current assets include property, plant and equipment, goodwill and intangible assets.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Japan	811,354	771,228
Malaysia	326,738	262,719
Asia (Excluding Japan and Malaysia)	23,591	18,110
Europe	37,048	28,996
North America	73,460	61,524
Total	1,272,191	1,142,577

(5) Major customers

Revenue from a single external customer accounting for 10% or more of revenue is as follows.

(In millions of yen)

	Name of related reportable segments	The year ended December 31, 2019	The year ended December 31, 2020
Ryosan Company, Limited	Automotive, Industrial/Infrastructure/IoT	75,146	73,599

7. Business Combinations

(1) Business combination by acquisition

(The year ended December 31, 2019)

A. Overview of business combination

The Company resolved at the Meeting of Board of Directors to reach an agreement with IDT, whereby IDT would become a wholly-owned subsidiary of the Company and concluded a merger agreement for the purpose of implementing the acquisition on September 11, 2018. In addition, on March 30, 2019, following the completion of the acquisition, IDT has become a wholly-owned subsidiary of the Company.

1) Name and overview of the acquiree

Name of the acquiree: Integrated Device Technology, Inc.

Business overview: Development, Manufacturing and Sale of mixed signal analog integrated circuit, etc.

2) Date of the acquisition

March 30, 2019 (Pacific Daylight Time: March 29, 2019)

3) Purpose of the Acquisition

The Group has been executing its growth strategy to thrive as a world-leading embedded solution provider in the rapidly changing global semiconductor market. As the pillars of its growth strategy, the Group is accelerating its focus on the automotive segment, where the Group has maintained a key global position over many years and further growth is anticipated in areas such as autonomous driving and EV/HEV; industrial and infrastructure segments, which are expected to advance with Industry 4.0 and 5G (fifth-generation) wireless communications, as well as the fast-growing IoT segment.

In order to achieve this growth strategy, the Group is working to expand its analog solution product portfolio and to strengthen its kit solution offerings that combine its world-leading microcontrollers (MCUs), system-on-chips (SoCs) and analog products. In this context, the Group already completed the acquisition of Intersil Corporation (hereafter “Intersil”), a U.S.-based analog semiconductor supplier, in February 2017.

With the Intersil acquisition, the Group enhanced its product portfolio of power management-related analog devices as well as its ability to deliver kit solutions to customers combining the Group’s MCUs/SoCs and analog products from the former Intersil. At the same time, the Group expanded its sales and design-ins outside of Japan and strengthened global management capabilities by absorbing the former Intersil’s experienced management team into the Group.

The Group has made the decision to acquire IDT, a U.S.-based analog semiconductor supplier, to contribute further towards the growth strategy. IDT is a global enterprise engaged in the development, production, sale, and provision of services related to analog semiconductor products such as mixed-signal semiconductor solutions particularly for markets related to the data economy such as data center and communication infrastructure that require big-data processing. IDT has annual sales of approximately US$843 million (approximately 92.7 billion yen at an exchange rate of 110 yen to the dollar, as of March 2018) and an operating profit margin of over 25% (Non-GAAP basis).

The main strategic benefits this transaction is expected to bring are: (i) Complementary products to expand the Group's solution offerings, and (ii) Expands business growth opportunities. Details are as follows:

(i) Complementary products to expand the Group's solution offerings
The acquisition will provide the Group with access to a vast array of robust analog mixed-signal capabilities in embedded systems, including RF, high performance timing, memory interface, real-time interconnect, optical interconnect, wireless power and smart sensors. The combination of these product lines with the Group's advanced MCUs and SoCs and power management ICs enables the Group to offer an integrated solution that supports the increasing demand of high data processing performance. The enriched solution offerings will bring optimal systems from external sensors through analog front end to processors and interfaces.

(ii) Expands business growth opportunities.
IDT's analog mixed-signal products for data sensing, storage and interconnect are key devices that support the growth of data economy. Acquisition of these products enables the Group to extend its reach to fast-growing data economy-related applications including data center and communication infrastructure and strengthens its presence in the industrial and automotive segments.

Welcoming IDT as part of the Group after the Intersil acquisition completed in 2017 is therefore seen as an effective measure to further enhance the Group's competitiveness in fields where the Group is focusing its efforts to strengthen the Company's position as a global leader.

4) Acquisition Method

For the purpose of the acquisition, the Group had established a wholly-owned subsidiary ("acquisition subsidiary") in Delaware, United States that then merged with IDT (in a reverse triangular merger). The surviving company following the merger is IDT. Cash was issued for IDT's shares as consideration for the merger, and the shares of the acquisition subsidiary owned by the Group was converted into outstanding shares in the surviving company, making the surviving company a wholly-owned subsidiary of the Group.

B. Consideration for the acquisition and its breakdown

Consideration		(In millions of yen) Amount
Cash consideration for the acquisition		703,559
Stock options consideration for the acquisition		23,188
Total consideration for the acquisition	A	726,747

Acquisition-related expenses for the business combination were 1,258 million yen, with 885 million yen recorded in "Selling, general and administrative expenses" for the fiscal year ended December 31, 2019.

C. Fair value of assets acquired, liabilities assumed and goodwill

		(In millions of yen) Date of acquisition (March 30, 2019)
Current assets		
Cash and cash equivalents		26,326
Trade and other receivables (Note 1)		16,136
Inventories		18,808
Other		786
Total current assets		62,056
Non-current assets		
Property, plant and equipment		19,775
Intangible assets		320,276
Other		11,852
Total non-current assets		351,903
Total assets		413,959
Current liabilities		
Trade and other payables		5,121
Bonds and borrowings (Note 2)		65,262
Other		13,997
Total current liabilities		84,380
Non-current liabilities		
Income taxes payable		2,599
Deferred tax liabilities		33,853
Other		3,759
Total non-current liabilities		40,211
Total liabilities		124,591
Net assets	B	289,368
Basis adjustments	C	8,598
Goodwill (Note 3)	A-B+C	445,976

(Note) 1. The total contract amount is same as the fair value, and there are no receivables that are expected to be unrecoverable.
2. The content of bonds and borrowings is bonds. Refer to “Note 19. Bonds and Borrowings” for more details.
3. Goodwill reflects future excess earning power expected from future business development including IDT and synergies between the Company and IDT. No amount of goodwill is expected to be deductible for tax purposes.

D. Expenditure for the acquisition

(In millions of yen)

Item	Amount
Consideration for acquisition in cash	(703,559)
Cash and cash equivalents held by the acquiree at the time of obtaining control	26,326
Amount of cash paid for the acquisition of subsidiaries	(677,233)
Basis adjustments	(8,598)
Amount of cash paid for the acquisition of subsidiaries (net amount)	(685,831)

E. Impact on profit of the period on the assumption that the date of the acquisition of IDT was at the beginning of the fiscal year

Provisional pro forma information (unaudited information) on the assumption that the date of the acquisition of IDT was at the beginning of the fiscal year is as follows.

(In millions of yen)

	The year ended December 31, 2019
Revenue	745,184
Loss	(8,598)

The above information has not been audited. In addition, items such as the amortization of intangible assets on the assumption that the date of the acquisition of IDT was at the beginning of the fiscal year were added to the approximate amount of impact. The pro forma information is not necessarily indicative of events that may happen in the future.

8. Cash and Cash Equivalents

The components of cash and cash equivalents are as described below. The balance of “Cash and cash equivalents” in the consolidated statement of financial position and the balance of “Cash and cash equivalents” in the consolidated statement of cash flows as of December 31, 2019 and December 31, 2020 are the same.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Cash and deposits	135,870	190,513
Short-term investments	10,598	29,273
Total	146,468	219,786

(Note) Cash and cash equivalents are classified as financial assets measured at amortized cost.

9. Trade and Other Receivables

The components of trade and other receivables are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Notes and trade receivables	81,473	77,686
Other receivables	3,081	4,751
Loss allowance	(95)	(119)
Total	84,459	82,318

(Note) Trade and other receivables are classified as financial assets measured at amortized cost.

10. Inventories

The components of inventories are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Merchandise and finished goods	29,089	26,411
Work in progress	55,554	58,138
Raw materials and supplies	6,142	5,212
Total	90,785	89,761

(Note) For write-downs of inventories previously recognized as an expense as a result of declining profitability, using the reversal method (figures in parentheses represent reversals) 2,879 million yen and (2,116) million yen were included in cost of sales in the prior fiscal year and the current fiscal year, respectively.

11. Other Assets and Liabilities

The components of other current assets and other non-current assets are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Prepaid expenses	8,786	8,004
Consumption taxes receivable	2,088	1,708
Other	2,420	3,335
Total	13,294	13,047
Current assets	7,344	8,162
Non-current assets	5,950	4,885

The components of other current liabilities and other non-current liabilities are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Accrued expenses	40,527	46,138
Paid leave payables	10,336	9,391
Advances received	536	818
Other	8,529	7,015
Total	59,928	63,362
Current liabilities	55,528	58,873
Non-current liabilities	4,400	4,489

12. Property, Plant and Equipment

(1) Movement during the fiscal year

The changes in acquisition cost, accumulated depreciation and impairment losses, and the carrying amounts of property, plant and equipment are as follows.

A. Acquisition Cost

(In millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Right-of-use assets	Land	Construction in progress	Total
Balances as of January 1, 2019	208,323	680,387	126,002	—	21,826	17,350	1,053,888
Adjustment due to adoption of IFRS16	(45)	(9,444)	(70)	22,240	—	—	12,681
Balances as of January 1, 2019 (After adjustment)	208,278	670,943	125,932	22,240	21,826	17,350	1,066,569
Acquisition	95	1,685	2,273	2,826	—	18,956	25,835
Acquisition due to business combination	7,504	7,156	1,290	1,161	2,023	290	19,424
Sales or disposal	(360)	(13,628)	(5,675)	(2,902)	(9)	(59)	(22,633)
Transfer from construction in progress	1,481	12,644	9,438	—	—	(23,564)	(1)
Exchange differences	(254)	(1,561)	(485)	59	3	(23)	(2,261)
Other	28	(208)	(328)	(616)	7	(72)	(1,189)
Balances as of December 31, 2019	216,772	677,031	132,445	22,768	23,850	12,878	1,085,744
Acquisition	190	1,732	2,265	5,593	—	16,366	26,146
Acquisition due to business combination	—	—	—	—	—	—	—
Sales or disposal	(703)	(5,756)	(8,258)	(7,619)	(205)	(92)	(22,633)
Transfer from construction in progress	748	10,990	4,963	—	—	(16,701)	—
Exchange differences	(1,014)	(3,539)	(4)	(114)	(156)	(61)	(4,888)
Other	(154)	(373)	(718)	188	4	(190)	(1,243)
Balances as of December 31, 2020	215,839	680,085	130,693	20,816	23,493	12,200	1,083,126

B. Accumulated depreciation and impairment losses

(In millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Right-of-use assets	Land	Construction in progress	Total
Balances as of January 1, 2019	(148,889)	(554,756)	(96,244)	—	(1,439)	(57)	(801,385)
Adjustment due to adoption of IFRS16 . . .	21	6,477	69	(6,567)	—	—	—
Balances as of January 1, 2019 (After adjustment)	(148,868)	(548,279)	(96,175)	(6,567)	(1,439)	(57)	(801,385)
Depreciation	(5,412)	(46,237)	(17,713)	(5,581)	—	—	(74,943)
Impairment losses	(118)	(303)	(124)	—	(26)	—	(571)
Sales or disposal	260	13,352	5,563	2,884	—	—	22,059
Exchange differences	132	887	327	(6)	—	—	1,340
Other	10	(122)	203	244	—	—	335
Balances as of December 31, 2019 . . .	(153,996)	(580,702)	(107,919)	(9,026)	(1,465)	(57)	(853,165)
Depreciation	(5,224)	(41,683)	(13,368)	(4,974)	—	—	(65,249)
Impairment losses	(384)	(147)	(135)	(891)	—	(513)	(2,070)
Sales or disposal	623	5,674	8,173	6,693	114	—	21,277
Exchange differences	234	2,432	(95)	38	—	—	2,609
Other	26	233	640	(73)	—	—	826
Balances as of December 31, 2020 . . .	(158,721)	(614,193)	(112,704)	(8,233)	(1,351)	(570)	(895,772)

C. Carrying amount

(In millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Right-of-use assets	Land	Construction in progress	Total
Balances as of January 1, 2019 . . .	59,410	122,664	29,757	15,673	20,387	17,293	265,184
Balances as of December 31, 2019	62,776	96,329	24,526	13,742	22,385	12,821	232,579
Balances as of December 31, 2020	57,118	65,892	17,989	12,583	22,142	11,630	187,354

(Note) 1. The amount of property, plant and equipment under construction is presented as construction in progress.
2. For property, plant and equipment on which a mortgage is placed as collateral for liabilities, see "Note 19. Bonds and Borrowings."
3. For commitments to the acquisition of property, plant and equipment, see "Note 36. Commitments and Contingencies."
4. Depreciation is included in "Cost of sales" and "Selling, general and administrative expenses" in the consolidated statement of profit or loss.
5. Impairment losses are included in "Other expenses" in the consolidated statement of profit or loss. For details on impairment losses, see "Note 15. Impairment of Non-financial Assets."
6. There are no borrowing costs included in the cost of property, plant and equipment.
7. For details on right-of-use assets, see "Note 14. Leases."

13. Goodwill and Intangible Assets

(1) Movement during the fiscal year

The changes in acquisition cost, accumulated amortization and impairment losses, and the carrying amounts of goodwill and intangible assets are as follows.

A. Acquisition cost

(In millions of yen)

	Goodwill	Intangible assets					
		Software	Capitalized development costs	Developed technology	Customer relationships	Other	Total
Balances as of January 1, 2019	187,230	73,378	8,056	142,320	24,753	89,757	338,264
Internally developed	—	1,632	1,616	—	—	—	3,248
Acquisitions	—	2,940	—	—	—	—	2,940
Acquisition due to business combination	445,976	2,290	—	217,540	79,025	21,421	320,276
Sales or disposal	—	(2,833)	(1,371)	—	—	(1,017)	(5,221)
Exchange differences	(8,176)	(48)	—	(4,401)	(1,203)	(347)	(5,999)
Other	—	631	—	(401)	—	572	802
Balances as of December 31, 2019	625,030	77,990	8,301	355,058	102,575	110,386	654,310
Internally developed	—	1,122	1,840	—	—	—	2,962
Acquisitions	—	2,566	—	—	—	39,245	41,811
Acquisition due to business combination	—	—	—	—	—	—	—
Reclassification	—	—	—	11,049	—	(11,049)	—
Sales or disposal	—	(485)	(1,714)	(1)	—	(27,587)	(29,787)
Exchange differences	(34,571)	(42)	—	(18,993)	(5,090)	(1,083)	(25,208)
Other	—	66	—	—	—	(307)	(241)
Balances as of December 31, 2020	590,459	81,217	8,427	347,113	97,485	109,605	643,847

B. Accumulated amortization and impairment losses

(In millions of yen)

	Goodwill	Intangible assets: Software	Capitalized development costs	Developed technology	Customer relationships	Other	Total
Balances as of January 1, 2019	—	(55,541)	(3,994)	(42,441)	(12,406)	(57,358)	(171,740)
Amortization	—	(6,534)	(1,730)	(39,971)	(5,278)	(18,523)	(72,036)
Impairment losses	—	—	—	—	—	(1,571)	(1,571)
Sales or disposal	—	2,771	1,371	401	—	428	4,971
Exchange differences	—	37	—	306	22	(111)	254
Other	—	199	—	—	(9)	204	394
Balances as of December 31, 2019	—	(59,068)	(4,353)	(81,705)	(17,671)	(76,931)	(239,728)
Amortization	—	(6,626)	(1,736)	(46,494)	(6,578)	(14,022)	(75,456)
Impairment losses	—	—	—	—	—	—	—
Sales or disposal	—	463	1,714	1	—	27,586	29,764
Exchange differences	—	12	—	5,141	626	242	6,021
Other	—	1	—	—	—	315	316
Balances as of December 31, 2020	—	(65,218)	(4,375)	(123,057)	(23,623)	(62,810)	(279,083)

C. Carrying amount

(In millions of yen)

	Goodwill	Intangible assets: Software	Capitalized development costs	Developed technology	Customer relationships	Other	Total
Balances as of January 1, 2019	187,230	17,837	4,062	99,879	12,347	32,399	166,524
Balances as of December 31, 2019	625,030	18,922	3,948	273,353	84,904	33,455	414,582
Balances as of December 31, 2020	590,459	15,999	4,052	224,056	73,862	46,795	364,764

(Note) 1. Of software in intangible assets, the carrying amount classified as internally generated assets was 856 million yen as of December 31, 2019 and 711 million yen as of December 31, 2020.
2. Construction in progress related to software is included in "Software" under intangible assets.
3. Intangible assets through installment purchase contracts (license fees) are included in "Other" under intangible assets.
4. There are no intangible assets with restrictions on ownership or intangible assets on which a mortgage is placed as collateral for liabilities.
5. For commitments related to the acquisition of intangible assets, see "Note 36. Commitments and Contingencies."
6. Amortization of intangible assets is included in "Cost of sales" and "Selling, general and administrative expenses" in the consolidated statement of profit or loss.
7. Impairment losses are included in "Other expenses" in the consolidated statement of profit or loss. For details on impairment losses, see "Note 15. Impairment of Non-financial Assets."

(2) Significant intangible assets

Major intangible assets are developed technology acquired in the business combination with former Intersil in February 2017 and former IDT in March 2019. The carrying amount of developed technology acquired in the business combination was 272,916 million yen as of December 31, 2019 and 223,677 million yen as of December 31, 2020, and the remaining amortization period as of December 31, 2020 is 3 to 10 years. The carrying amount of customer relationships was 84,905 million yen as of December 31, 2019 and 73,862 million yen as of December 31, 2020, and the remaining amortization period as of December 31, 2020 is 10 to 12 years.

(3) Intangible assets not yet available for use

The carrying amount of intangible assets not yet available for use is included in "Other" and was 16,982 million yen as of December 31, 2019 and 9,522 million yen as of December 31, 2020 and represents in-process research and development. In-process research and development is reclassified as "Developed technology" and starts to be amortized when the development has been completed and the related technology has been put in operational use. The amount of reclassification is 11,049 million yen for the year ended December 31, 2020.

14. Leases

(1) Leases as lessee

A. Lease expenses, income and cash flows

Lease expenses, income and cash flows are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Depreciation charge for right-of-use assets by class of underlying asset		
Land	93	93
Buildings	2,732	2,861
Machinery, equipment and vehicles	2,586	1,892
Tools, furniture and fixtures	170	128
Total	5,581	4,974
Interest expense on lease liabilities	251	226
Expense relating to short-term leases	2,645	2,548
Expense relating to leases of low-value assets (excluding short-term leases)	493	437
Expense relating to variable lease payments which are not reflected in the measurement of lease liabilities	—	—
Income from subleasing right-of-use assets	—	—
Total cash outflows for leases	9,086	8,071
Gain (loss) from sale and leaseback transactions	—	—

B. Right-of-use assets which are included in the carrying amount of property, plant and equipment

The carrying amount and the increase/decrease in carrying amount of right-of-use assets which are included in the carrying amount of property, plant and equipment are as follows.

(In millions of yen)

	Balance as of January 1, 2019	Balance as of December 31, 2019	Balance as of December 31, 2020
Land	346	268	175
Buildings	9,181	9,525	8,759
Machinery, equipment and vehicles	5,909	3,763	3,513
Tools, furniture and fixtures	237	186	136
Total	15,673	13,742	12,583

(Note) The increased amount of right-of-use assets for the fiscal year ended December 31, 2020 was 5,593 million yen.

C. Nature of the leasing activities

The Group leases land, building, machinery, equipment and vehicles.

The terms of lease contracts are negotiated individually and include a wide variety of the terms of contracts.

D. Options of extension and termination

The options of extension and termination are included in many lease contracts for buildings, machinery and equipment. The lease term for office buildings is mainly from 3 to 10 years and for machinery and equipment, its term is from 3 to 5 years. Some contracts include an option to extend the lease for a period of one year or the same lease years for the current lease contract after the termination date. In addition, some contracts include an option for early termination when the lessee notifies the lessor between six months to one year before the termination date.

These options will be utilized to maximize operational flexibility from the point of asset management used in the Group's businesses.

15. Impairment of Non-financial Assets

The Group recorded impairment losses for the assets below. Impairment losses are included in "Other expenses" in the consolidated statement of profit or loss.

The components of assets for which the impairment losses are recorded are as follows.

The year ended December 31, 2019

(In millions of yen)

	Reportable segments		Total
	Automotive	Industrial/ Infrastructure/IoT	
Property, plant and equipment	371	203	574
Intangible assets	846	751	1,597
Other	55	30	85
Total	1,272	984	2,256

The year ended December 31, 2020

(In millions of yen)

	Reportable segments		Total
	Automotive	Industrial/ Infrastructure/IoT	
Property, plant and equipment	1,275	795	2,070
Total	1,275	795	2,070

(Note) Impairment losses recognized as for right-of-use assets are included in the impairment losses of property, plant and equipment for the year ended December 31, 2020. The amount included in the impairment losses of property, plant and equipment is 891 million yen.

(1) Impairment losses

The Group assesses impairment at the grouping level of a smallest identifiable group that generates cash inflows that are largely independent, based on the categories used for business management. The Group assesses impairment by each individual asset for significant assets to be disposed of and idle assets.

For the year ended December 31, 2019

(Assets to be disposed of))

For the Automotive and Industrial/Infrastructure/IoT business, the Group has performed impairment tests as independent cash-generating units for the assets that have been decided to be disposed and writes down the carrying amount of assets to their recoverable amount. As a result, the Group has recorded impairment losses of 1,939 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is set at zero for assets difficult to sell or estimate the selling amount and the hierarchy level of the fair value is 3.

(Idle assets)

For the Automotive and Industrial/Infrastructure/IoT business, the Group has performed impairment tests as independent cash-generation units, written down the carrying amount of idle assets that are unlikely to be used to their recoverable amount, and recorded impairment losses of 317 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is set at zero because it is difficult to sell these assets, and the hierarchy level of the fair value is 3.

For the year ended December 31, 2020

(Assets to be disposed of)
For the Automotive and Industrial/Infrastructure/IoT business, the Group performs impairment tests as independent cash-generating units for the assets that have been decided to be disposed and writes down the carrying amount of assets to their recoverable amount. As a result, the Group has recorded impairment losses of 168 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is set at zero for assets difficult to sell or estimate the selling amount and the hierarchy level of the fair value is 3.

(Idle assets)
For the Automotive and Industrial/Infrastructure/IoT business, the Group performs impairment tests as independent cash-generation units, writes down the carrying amount of idle assets that are unlikely to be used to their recoverable amount, and recorded impairment losses of 1,902 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is set at zero because it is difficult to sell these assets, and the hierarchy level of the fair value is 3.

(2) Impairment test of goodwill and intangible assets not yet available for use

The Group performs impairment tests for cash-generating units to which goodwill and intangible assets not yet available for use are allocated at a certain time each fiscal year and whenever there is any indication of impairment.

Goodwill recorded in the consolidated statement of financial position was recognized when the Company merged with former Intersil for the fiscal year ended December 31, 2017 and former IDT for the fiscal year ended December 31, 2019 and it is allocated to the cash-generating units of the Group expected to provide future excess earning power arising from synergies of these business combinations.

In the impairment test, goodwill and intangible assets not yet available for use that were allocated to the cash-generating units of the Group are as follows.

(In millions of yen)

	Reportable segments	Cash-generating units	As of December 31, 2019	As of December 31, 2020
Goodwill	Automotive	Automotive	244,950	231,401
	Industrial/ Infrastructure/IoT	Industrial/ Infrastructure/IoT	380,080	359,058
In-process research and development	Automotive	Automotive	3,287	2,070
	Industrial/ Infrastructure/IoT	Industrial/ Infrastructure/IoT	13,695	7,452

The recoverable amount of the cash-generating units is measured at the value in use. The value in use is calculated by discounting the cash flows, which is estimated based on the five-year business plan that was approved by management and the estimated permanent growth rate for the period thereafter, to the present value using the pre-tax discount rate. Significant assumptions which have an impact to the calculation of the value in use include sales revenue and gross margin in the business plan, permanent growth rate, discount rate and others. These assumptions are determined in the consideration of past experiences and external information.

Additionally, the Group includes the estimated impact of COVID-19 to estimates and assumptions which are based on information available and management believes to be reasonable at the moment.

The discount rates are the weighted average capital cost before tax. The discount rates used for the calculation of the value in use are 11.7% in the Automotive Business in the current fiscal year (9.8% in the prior fiscal year) and 11.2% in the Industrial/Infrastructure/IoT Business in the current fiscal year (9.8% in the prior fiscal year).

For cash flows in a period beyond the projected period that is approved by management, the value in use is calculated with the growth rate as 2.0% both in the prior fiscal year and the current fiscal year. The approved growth rate used for the estimation for the period exceeding the approved business plan is determined based on the estimated inflation rate of the market to which the cash-generating units belong.

Because the recoverable amount of cash-generating units sufficiently exceeds the carrying amount in the current fiscal year, management believes that it is unlikely that the recoverable amount of the cash-generating units will be lower than the carrying amount even if the major assumptions (Inflation rate/ Discount rate before tax) used in the impairment test are changed in a reasonable range.

The following table shows the range of reasonably expected fluctuation of the major assumptions (Inflation rate/ Discount rate before tax) used in the impairment test.

Major assumptions	Cash-generating units	Prior fiscal year	Current fiscal year
Inflation rate	Automotive	1.5~2.5%	1.5~2.5%
	Industrial/Infrastructure/IoT		
Discount rate before tax	Automotive	8.8~10.8%	10.7~12.7%
	Industrial/Infrastructure/IoT		10.2~12.2%

For certain in-process research and development that were acquired in a business combination, since such assets are not yet available to use, the Group performs impairment test at a certain time each fiscal year and whenever there is any indication of impairment. The Group recognized no impairment losses during the current year and the prior year since the value in use of the cash generating units exceeded the carrying amount as a result of the impairment test.

16. Other Financial Assets

(1) Components of other financial assets

The components of other financial assets are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Stocks (Note 1)	3,926	4,740
Investment trust (Note 2)	3,967	4,160
Long-term accounts receivable - other (Note 3)	1,244	8,350
Other (Note 4)	1,326	1,456
Total	10,463	18,706
Current assets	468	605
Non-current assets	9,995	18,101

(Note) 1. Stocks are classified either as equity instruments measured at fair value through other comprehensive income or financial assets measured at fair value through profit or loss (see “Note 33. Financial Instruments”).

2. Investment trust is classified as Financial assets measured at fair value through profit or loss.

3. Financial assets measured at amortized cost are included in “Long-term accounts receivable – other.”

4. Term deposits with a deposit term of more than three months, security deposits and long-term accounts receivable are included in “Other.” These assets are classified as financial assets measured at amortized cost.

(2) Equity instruments measured at fair value through other comprehensive income

Name of major equity instruments and their fair value, etc. measured at fair value through other comprehensive income are as follows.

(In millions of yen)

Company name	As of December 31, 2019	As of December 31, 2020
LeddarTech Inc.	1,096	1,035

(3) Derecognized equity instruments measured at fair value through other comprehensive income

The fair value and cumulative losses (before tax) as of the date of derecognition of equity instruments measured at fair value through other comprehensive income that were derecognized during the period are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Fair value	606	429
Cumulative losses	(175)	(429)

(Note) If equity instruments measured at fair value through other comprehensive income are derecognized, cumulative losses (after tax) previously recognized in other comprehensive income are reclassified to retained earnings. The corresponding amount was 118 million yen in the prior fiscal year and 330 million yen in the current fiscal year.

17. Income Taxes

(1) Components of and changes in deferred tax assets and deferred tax liabilities

The components of and changes in deferred tax assets and deferred tax liabilities by major causes of their occurrence are as follows.

The year ended December 31, 2019

(In millions of yen)

	As of January 1, 2019	Recognized in profit or loss	Recognized in other comprehensive income	Business combination	As of December 31, 2019
Deferred tax assets					
Inventories	6,824	(1,000)	—	1	5,825
Property, plant and equipment and other	5,410	(79)	—	117	5,448
Research and development expense	1,644	(229)	—	—	1,415
Accrued expenses	10,792	(1,247)	—	1,339	10,884
Retirement benefit liability	6,358	(641)	788	—	6,505
Carryforward of unused tax losses	31,510	(5,813)	—	4,253	29,950
Carryforward of unused tax credits	2,877	1,428	—	793	5,098
Other	7,808	4,654	—	(273)	12,189
Subtotal	73,223	(2,927)	788	6,230	77,314
Deferred tax liabilities					
Intangible assets and other	(36,323)	4,890	—	(33,424)	(64,857)
Tax on undistributed earnings	(5,475)	(512)	—	—	(5,987)
Total income from specified foreign subsidiaries, etc.	(4,250)	3,338	—	—	(912)
Other	(1,780)	(583)	27	(429)	(2,765)
Subtotal	(47,828)	7,133	27	(33,853)	(74,521)
Net deferred tax assets (liabilities)	25,395	4,206	815	(27,623)	2,793

The year ended December 31, 2020

(In millions of yen)

	As of January 1, 2020	Recognized in profit or loss	Recognized in other comprehensive income	Business combination	As of December 31, 2020
Deferred tax assets					
Inventories	5,825	(494)	—	—	5,331
Property, plant and equipment and other . . .	5,448	1,476	—	—	6,924
Research and development expense . .	1,415	(692)	—	—	723
Accrued expenses	10,884	619	—	—	11,503
Retirement benefit liability	6,505	(1,540)	162	—	5,127
Carryforward of unused tax losses	29,950	(14,359)	—	—	15,591
Carryforward of unused tax credits	5,098	4,004	—	—	9,102
Other	12,189	2,066	—	—	14,255
Subtotal	77,314	(8,920)	162	—	68,556
Deferred tax liabilities					
Intangible assets and other	(64,857)	9,910	—	—	(54,947)
Tax on undistributed earnings	(5,987)	(163)	—	—	(6,150)
Total income from specified foreign subsidiaries, etc.	(912)	(201)	—	—	(1,113)
Other	(2,765)	(1,760)	99	—	(4,426)
Subtotal	(74,521)	7,786	99	—	(66,636)
Net deferred tax assets (liabilities)	2,793	(1,134)	261	—	1,920

(Note) The Group considers the possibility that a portion of, or all of, the deductible temporary differences or carryforward of unused tax losses can be utilized against future taxable profits in the recognition of deferred tax assets.

Deferred tax liabilities related to intangible assets and other include those that are related to an uncertain tax position at an overseas subsidiary and calculated using the expected value method.

The Group reflects the impact of COVID-19 to estimates and assumptions to a reasonable extent based on available information. The Group reflects the impact in estimating collectability of deferred tax assets.

The differences between total amount recognized in profit or loss and total amount of the deferred tax expenses are due to changes in foreign exchange rate.

(2) Deductible temporary differences, etc. for which no deferred tax assets are recognized

The amounts of deductible temporary differences, carryforward of unused tax losses and carryforward of unused tax credits for which no deferred tax assets are recognized are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Deductible temporary differences	—	—
Carryforward of unused tax losses	342,697	210,142
Carryforward of unused tax credits	16,542	16,178
Total	359,239	226,320

(Note) Deductible temporary differences and carryforward of unused tax losses are measured on an income basis, and carryforward of unused tax credits is measured on a tax amount basis.

The expiration schedule of the carryforward of unused tax losses for which no deferred tax assets are recognized is as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
First year	142,499	197,441
Second year	182,023	7,531
Third year	7,780	—
Fourth year	—	—
Fifth year or thereafter	10,395	5,170
Total	342,697	210,142

The expiration schedule of the carryforward of unused tax credits for which no deferred tax assets are recognized is as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
First year	316	—
Second year	—	—
Third year	—	—
Fourth year	—	—
Fifth year or thereafter	16,226	16,178
Total	16,542	16,178

The Group adopts the consolidated taxation system in Japan. The above figures do not include the amount of the carryforward of unused tax losses for which no deferred tax asset is recognized for local taxes (residential tax and business tax) that are not subject to the consolidated taxation system in Japan. The amount of the carryforward of unused tax losses for local taxes (residential tax and business tax) was 12,249 million yen for residential tax and 398,074 million yen for business tax in the prior fiscal year (as of December 31, 2019) and 11,755 million yen for residential tax and 265,151 million yen for business tax in the current fiscal year (as of December 31, 2020).

(3) Components of income tax expense

The components of income tax expense are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Current tax expense		
Current tax expense	8,869	14,493
Tax expense from previous periods	1,471	1,835
Total current tax expense	10,340	16,328
Deferred tax expense		
Origination and reversal of temporary differences	(7,298)	3,385
Effects from tax regulation changes	(104)	(5)
Revaluation of deferred tax assets	2,551	294
Other	414	(512)
Total deferred tax expense	(4,437)	3,162
Total income tax expense	5,903	19,490

(Note) 1. Current tax expense includes the amount of previously unrecognized tax loss, tax credits or temporary differences of a prior period, and decreases by 2,732 million yen and 6,008 million yen in the prior fiscal year and the current fiscal year, respectively.

2. Current deferred tax expense in the prior fiscal year and the current fiscal year does not include the amount of previously unrecognized tax loss, tax credits or temporary differences of a prior period

3. Current deferred tax expense includes the amount of previously unrecognized tax loss, tax credits or temporary differences of a prior period and increases by 6,566 million yen and 4,900 million yen in the prior fiscal year and the current fiscal year, respectively.

(4) Reconciliation of the statutory effective tax rate and the average effective tax rate

The reconciliation of the statutory effective tax rate and the average effective tax rate is as follows.

(%)

	The year ended December 31, 2019	The year ended December 31, 2020
Statutory effective tax rate (Note)	31.5	31.5
Changes in unrecognized deferred tax assets	(438.2)	(1.4)
Permanent differences	433.8	1.2
Foreign tax rate differences	(2,504.5)	2.0
Tax credits	860.8	(6.5)
Tax on undistributed earnings	(157.6)	0.2
Other	(42.5)	2.9
Average effective tax rate	(1,816.7)	29.8

(Note) The applicable statutory effective tax rate is the sum of 23.1% for national taxes and 8.4% for local taxes for the prior fiscal year and 24.4% for national taxes and 7.1% for local taxes for the current fiscal year.

Major taxes imposed on the Company and its subsidiaries in Japan are income tax, residential tax and business tax. The applicable statutory effective tax rate in Japan is 31.5% in the prior fiscal year and current fiscal year. Income taxes for overseas subsidiaries are calculated based on local tax rates applicable in their jurisdictions.

18. Trade and Other Payables

The components of trade and other payables are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Trade payables	64,740	67,008
Other payables	16,974	47,433
Electronically recorded obligations	16,725	7,852
Refund liabilities	2,593	17,119
Total	101,032	139,412
Current liabilities	100,187	114,235
Non-current liabilities	845	25,177

(Note) Trade and other payables are classified as financial liabilities measured at amortized cost.

19. Bonds and Borrowings

(1) Bonds

During the year ended December 31, 2019, following the IDT acquisition, convertible bonds that IDT issued on November 1, 2015 (Total amount issued: 374 million USD (41,483 million yen), interest rate: 0.875%, redemption date: November 22, 2022) were recorded at the fair value of 588 million USD (65,262 million yen) and then repaid.

(2) The components of borrowings are as follows.

(In millions of yen)

	Maturity	Average interest rate	As of December 31, 2019	As of December 31, 2020
Syndicated loan A	From Mar.2019 to Mar.2024	0.83%	395,973	302,803
Syndicated loan B	From Mar.2019 to Mar.2024	0.83%	232,150	232,150
Syndicated loan C	From Jun.2019 to Jun.2024	0.83%	148,975	148,850
Total			777,098	683,803
Less: Arrangement fee			(5,351)	(4,070)
Less: Current portion of long-term borrowings			(93,170)	(93,170)
Long-term borrowings			678,577	586,563

(Note) 1. Borrowings are classified as financial liabilities measured at amortized cost.
2. For the balance of borrowings by maturity, see "Note 33. Financial Instruments."
3. For the average interest rate, the weighted average interest rate on the balance of borrowings at the end of the current fiscal year is stated.
4. Financial covenants are included in borrowings.
5. In order to refinance the existing borrowings to finance partial funds necessary for the acquisition and working capital as the medium-and-long term funds, the Company has entered into a syndicated loan agreement with the total amount of 897,000 million yen on January 15, 2019. During the year ended December 31, 2019, 698,000 million yen of term loan with availability period (Syndicated loan A and B, Implementation date: March 28, 2019, Repayment date: March 28, 2024, participating financial institutions: MUFG Bank, Ltd., Mizuho Bank, Ltd., Sumitomo Mitsui Trust Bank, Limited and other 5 financial institutions) has been executed. In addition, During the year ended December 31, 2019, borrowings of 149,000 million yen of term loan (Syndicated loan C, Implementation date: June 28, 2019, Repayment date: June 28, 2024, participating financial institutions: MUFG Bank, Ltd., Mizuho Bank, Ltd., Sumitomo Mitsui Trust Bank, Limited) have been conducted to refinance the existing term loan.

(3) Assets pledged as collateral and corresponding liabilities on the transition date and as of each fiscal year end are as follows.

A. Assets pledged as collateral

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Buildings and structures	38,329	35,480
Machinery, equipment and vehicles	50,872	33,708
Land	16,811	16,720
Total	106,012	85,908

(Note) Other than the above, stock of subsidiary (802,492 million yen for December 31, 2019 and 1,148,461 million yen for December 31, 2020) has been eliminated on consolidation is collateralized.

B. Liabilities corresponding to assets pledged as collateral

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Current portion of long-term borrowings	93,170	93,170
Long-term borrowings (excluding current portion)	678,577	586,563
Total	771,747	679,733

20. Other Financial Liabilities

The components of other financial liabilities are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Lease liabilities	14,155	13,977
Other	300	300
Total	14,455	14,277
Current liabilities	4,362	4,036
Non-current liabilities	10,093	10,241

21. Provisions

The components of provisions and their changes are as follows.

(In millions of yen)

	Asset retirement obligations	Provision for business restructuring	Provision for product warranties	Provision for loss on litigation	Total
Balances as of December 31, 2019	3,028	3,039	249	5,065	11,381
Current liabilities	59	2,898	249	4,315	7,521
Non-current liabilities	2,969	141	—	750	3,860
Increase during the period	46	3,627	158	627	4,458
Decrease during the period (utilization)	(150)	(2,900)	(98)	(2,697)	(5,845)
Decrease during the period (reversal)	—	(275)	(41)	—	(316)
Period interest expense in discount calculation	17	(38)	(17)	—	(38)
Other	(15)	(72)	(6)	(131)	(224)
Balances as of December 31, 2020	2,926	3,381	245	2,864	9,416
Current liabilities	21	3,253	245	2,864	6,383
Non-current liabilities	2,905	128	—	—	3,033

A. Asset retirement obligations

The expected amount related to performing obligations necessary to restore assets to their original state under the real estate lease agreements of offices and plants used by the Group and legal obligations to remove hazardous substances related to non-current assets is recorded as a provision. The amount of asset retirement obligations was computed using an estimated useful life of 5 to 47 years as well as a discount rate of 0.1% to 0.3%, although the timing of payments will be affected by future business plans, and other factors.

B. Provision for business restructuring

Provision for business restructuring is recorded for expected future losses in connection with business structure reform and consolidation. The timing of payments will be affected by future business plans, and other factors.

C. Provision for product warranties

The Group accrues product warranty liabilities for estimated future warranty costs using the individual estimates for the specific matters as well as the historical ratio of warranty costs to net sales.

D. Provision for loss on litigation

The Group records the estimated amount of reasonably calculated losses, considering individual risks, for losses on litigation which could be incurred in the future from lawsuits and disputed cases. (Refer to "Note 36. Commitments and Contingencies, (4) Others" considering the policy for extended disclosure for Contingencies)

22. Employee Benefits

The Group adopts post-employment benefit plans such as a defined benefit plan and a defined contribution plan, except for some overseas consolidated subsidiaries.

(1) Defined benefit plans

A. Characteristics of defined benefit plans and related risks

The characteristics of defined benefit plans and related risks are as follows.

(a) Characteristics of defined benefit plans

The defined benefit plans of the Company and its subsidiaries in the Group include (i) a severance indemnity plan and (ii) a defined benefit corporate pension plan. The Group may also provide extra retirement payments upon the retirement of employees.

(i) The severance indemnity plan is an unfunded plan to make a lump-sum payment only with an internal reserve without making an external reserve for the obligations of the retirement benefit plans. As the lump-sum payment is paid in an amount based on salaries and number of service years in accordance with the retirement allowance regulations including the rules of employment of each company.

(ii) The defined benefit corporate pension plan is a defined benefit pension and a funded plan established under the Defined Benefit Corporate Pension Act (enforced in April 2002). It is a fund-type corporate pension, and a lump-sum payment or an annuity is paid from the fund based on salaries and number of service years. In the defined benefit corporate pension plan, administrators of the corporate pension, such as the executive directors of the employer and the fund, abide by laws, regulations and asset management and investment contracts, etc., and their standards of practice such as the prohibition of acts involving conflicts of interest against the participants in the plan have been clearly defined.

In the defined benefit corporate pension plan, the amount of benefits is calculated based on the cumulative number of points granted to employees according to their job classification. The Company and its subsidiaries in Japan adopt a cash balance pension plan for the defined benefit corporate pension plan. Under the cash balance pension plan, each participant has an account in which a certain amount calculated by the revaluation rate that is determined based on the current base salary, the job classification and the market interest rate is accumulated.

(b) Risks to which an entity is exposed by the plan

The Group is exposed to actuarial risks such as price fluctuation risk by plan assets, interest rate risk and life expectancy rate risk by present value of obligations of the defined benefit plans.

B. Amounts recognized in the consolidated statement of financial position

The amounts recognized in the consolidated statement of financial position are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Present value of obligations of the funded defined benefit plans (with plan assets)	127,397	124,029
Fair value of plan assets	(144,613)	(145,862)
Funded status	(17,216)	(21,833)
Impact of asset ceiling	17,989	22,767
Present value of obligations of the unfunded defined benefit plans (without plan assets)	28,799	29,078
Net amount of liabilities (assets) pertaining to defined benefits recognized in the consolidated statement of financial position	29,572	30,012
Retirement benefit liability	29,572	30,012
Retirement benefit asset	—	—

C. Changes in the present value of defined benefit obligation

The changes in the present value of defined benefit obligation are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Present value of defined benefit obligation (beginning)	164,246	156,196
Service cost	2,835	2,572
Interest expenses	1,131	969
Benefits paid	(16,739)	(5,981)
Remeasurements of defined benefit plans		
(i) Actuarial differences arising from changes in demographic assumptions	2,408	82
(ii) Actuarial differences arising from changes in financial assumptions	2,617	204
(iii) Revisions to other results	(175)	(1,269)
Exchange differences	82	(132)
Other	(209)	466
Present value of defined benefit obligation (ending)	156,196	153,107

The weighted average duration of the defined benefit obligation in each fiscal year is as follows.

	The year ended December 31, 2019	The year ended December 31, 2020
Weighted average duration	12.4 years	12.7 years

D. Changes in the fair value of plan assets

Changes in the fair value of plan assets are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Fair value of plan assets (beginning)	142,218	144,613
Interest income	1,024	950
Remeasurement – Return on plan assets	7,900	3,319
Contributions by employer (Note 1)	5,830	2,258
Benefits paid	(12,570)	(4,710)
Exchange differences	408	(547)
Other	(197)	(21)
Fair value of plan assets (ending)	144,613	145,862

(Note) 1. Contributions to the defined benefit plans in the Group are made in consideration of factors such as the financial position of the Group, the funding situation of plan assets and actuarial factors based on laws and regulations.In the fiscal year ending December 31, 2021, 2,139 million yen is planned to be contributed to the defined benefit pension plans.

2. The purpose of the investment of plan assets of the Group is to secure necessary revenue in the long term within the acceptable range of risks in order to provide benefits to beneficiaries reliably in the future.The target rate of return aims to exceed the assumed interest rate required for the financial position of the pension scheme on a stable basis for the long term.

The Group has set a "policy asset mix" to achieve the investment target and attempts to make an investment to maintain the asset mix based on the policy asset mix. The asset mix is reviewed as necessary and tailored to changes in the situation of the Group and the institution and the environment surrounding the Group.

3. Some consolidated subsidiaries participate in a multi-employer defined benefit pension plan.

E. Changes in the impact of the asset ceiling

The changes in the impact of the asset ceiling are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Impact of asset ceiling (beginning)	(10,724)	(17,989)
Interest income	(136)	(149)
Remeasurement – Changes in the impact of the asset ceiling	(6,933)	(4,725)
Exchange differences	(93)	169
Other	(103)	(73)
Impact of the asset ceiling (ending)	(17,989)	(22,767)

(Note) The Group sets the asset ceiling and calculates liabilities in some of its pension plans because economic benefits could not be enjoyed as a result of contributions that will not be reduced or returned in the future.

F. Components of fair value of plan assets by type

The components of the fair value of plan assets by type are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Equity instruments		
Domestic equity securities	15,617	18,391
Foreign equity securities	19,631	21,355
Debt instruments		
Domestic bonds	12,841	12,703
Foreign bonds	32,393	26,683
General accounts of life insurance company	26,013	34,280
Cash and cash equivalents	14,192	1,889
Other	23,926	30,561
Total	144,613	145,862

(Note) Most of plan assets are operated through commingled funds and classified as those with no public market price in active markets. These commingled funds are appropriately diversified into stocks and debts that generally listed in active market based on corporate pension fund code. "General accounts of life insurance company" are the accounts that the life insurance company jointly manages the funds with several contracts and includes a guaranteed interest rate and return of capital. The major components of "Other" represent alternative instruments that are invested using long/short positions and securitized products.

G. Major actuarial assumptions

Major actuarial assumptions (weighted average) are as follows.

	As of December 31, 2019	As of December 31, 2020
Discount rate	0.7%	0.7%

H. Sensitivity analysis

In the calculation of the defined benefit obligation in the sensitivity analysis, the same method as the calculation method for the defined benefit obligation recognized in the consolidated statement of financial position is used.

The sensitivity analysis is made based on changes in assumptions that can be reasonably presumed at the end of the reporting period. In addition, although the sensitivity analysis assumes that all actuarial assumptions other than those that are subject to the sensitivity analysis remain constant, changes in those other actuarial assumptions could have an impact in reality.

The impact of a 0.5% change in actuarial assumptions on the defined benefit obligation is as follows.

(In millions of yen)

		As of December 31, 2019	As of December 31, 2020
Discount rate	0.5% increase	(8,215)	(9,028)
	0.5% decrease	9,060	8,348

(2) Defined contribution plans

The Group has adopted defined contribution pension plans. The amount recognized as an expense in relation to the defined contribution plans, including employee pension premiums paid by the employer under the Employees' Pension Insurance Act, is as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Contributions	8,963	8,328

(Note) This amount is included in "Cost of sales" and "Selling, general and administrative expenses" in the consolidated statement of profit or loss.

(3) Employee benefit expenses

The components of the employee benefit expenses are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Personnel expenses	159,580	156,486
Retirement benefit expenses	12,041	11,068
Extra retirement payments etc.	11,800	1,873
Other	2,736	1,906
Total	186,157	171,333

(Note) This amount is included in "Cost of sales", "Selling, general and administrative expenses" and "Other expenses" in the consolidated statement of profit or loss.

23. Equity and Other Equity Items

(1) Share capital and treasury shares

Ordinary shares

	Total number of authorized shares (shares)	Total number of issued shares (shares)	Treasury shares (shares)
As of December 31, 2019	3,400,000,000	1,710,276,790	2,581
Changes (Note 2)	—	21,622,200	—
As of December 31, 2020	3,400,000,000	1,731,898,990	2,581

(Note) 1. All the shares issued by the Company are non-par value ordinary shares with no restrictions on rights.
2. Changes are due to the exercise of stock options. As to stock options, see "Note 32. Share-based Payments."
3. Total number of issued shares has been already paid-up.

(2) Surplus

A. Capital surplus

The Companies Act of Japan stipulates that one half or more of the paid-in amount from the issue of shares shall be accounted for as share capital, and the remainder shall be accounted for as capital reserve included in capital surplus. Under the Companies Act, the amount of such capital reserve may be transferred to shared capital by the resolution of a shareholders meeting.

B. Retained earnings

The Companies Act of Japan stipulates that one tenth of the amount of the distributions of surplus shall be accumulated as capital reserve or legal reserve until the sum of the capital reserve and legal reserve reaches one fourth of the share capital. The accumulated retained earnings reserve may be appropriated to cover a loss. The Companies Act also states that the retained earnings reserve may be used by the resolution of a shareholders meeting.

24. Revenue

(1) Disaggregation of revenue

Disaggregation of revenue recognized from contracts with customers are stated in "Note 6. Business Segments, (2) Information on reportable segments and (4) Information on regions and countries." Also, all of the revenue arises from contracts with customers.

The Group engages in research, design, development, manufacturing, sales and services related to various kinds of semiconductors as a manufacturer specializing in semiconductors, and the revenue is mainly due to sales of semiconductor products.

Regarding the sales of these products, the Group recognizes revenue when the customer obtains control over the product which is at the time of delivery of a product because legal title of the product, physical possession of the asset, the significant risks and rewards of ownership are transferred to the customer, and the customer has an obligation to pay for the products at the time of delivery of the product.

Revenue is measured at the amount of promised consideration in contracts with customers.

With regard to sales contract including variable consideration such as rebate and discounts, the transaction price is estimated and determined using the most-likely-amount method based largely on historical data, considering variable prices within a range that will not result in significant deviation between estimate and historical data.

Consideration under sales contracts is recovered mainly within one year from satisfaction of a performance obligation and includes no significant financing components.

(2) Accounts arising from contracts

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Contract assets	—	—
Contract liabilities	1,688	297

(Note) 1. Contract liabilities relate to the payment received in advance of performance under the contract. The contract liabilities are reclassified to revenue when the Group satisfies a performance obligation based on the contract.
2. The amounts of revenues recognized during the prior fiscal year and the current fiscal year from the performance obligations satisfied in the past periods were immaterial.
3. Of the revenues recognized in the prior fiscal year, 269 million yen was included in the balance of contract liabilities as of January 1, 2019. In addition, of the revenues recognized in the current fiscal year, 244 million yen was included in the balance of contract liabilities as of January 1, 2020.

(3) Transaction price allocated to the remaining performance obligation
The Group uses the practical expedient of omitting the disclosure of information on the remaining performance obligations because it has no significant transactions with individual expected contractual terms exceeding one year. In addition, there are no significant amounts in consideration from contracts with customers that are not included in transaction prices.

(4) Assets recognized from the cost to obtain or fulfill contracts with customers
There are no assets recognized from the cost to obtain or fulfill contracts with customers.

25. Selling, General and Administrative Expenses

The components of selling, general and administrative expenses are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Research and development expenses (Note)	133,165	133,237
Depreciation and amortization	56,437	61,982
Personnel expenses	45,994	43,875
Retirement benefit expenses	3,215	2,436
Other	34,643	24,738
Total	273,454	266,268

(Note) As stated in “2. Basis for Preparation (4) Changes in accounting policy ”, research and development expenses for the year ended December 31, 2019 disclosed as comparative information have been revised.

26. Other Income

The components of other income are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Insurance claim income	34	2,388
Gain on sales of property, plant and equipment	653	762
Government grant income	423	384
Other	1,192	502
Total	2,302	4,036

27. Other Expenses

The components of other expenses are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Business restructuring expenses (Note 1)	12,041	4,137
Impairment losses (Note 2)	2,256	2,070
Other	3,080	2,108
Total	17,377	8,315

(Note) 1. The Group has reformed its businesses and structures of production to strengthen its financial basis, and those related expenses are shown as business restructuring expenses. The main items of business restructuring expenses for the year ended December 31, 2019 were additional retirement benefits of the early retirement incentive program. The main items of business restructuring expenses for the year ended December 31, 2020 were personnel expenses such as additional retirement benefits and equipment removal expenses of property, plant and equipment associated with consolidating the operating bases.

2. For details on impairment losses, see "Note 15. Impairment of Non-financial Assets."

28. Finance Income and Finance Costs

The components of finance income and finance costs are as follows.

(1) Finance income

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Interest income		
Financial assets measured at amortized cost	1,325	307
Valuation gain of investment trust		
Financial assets measured at fair value through profit or loss	548	1,738
Dividend income		
Financial assets measured at fair value through profit or loss	238	240
Foreign exchange gain	—	5,295
Other	75	43
Total	2,186	7,623

(2) Finance costs

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Interest expenses		
Financial liabilities measured at amortized cost	7,484	7,541
Foreign exchange loss (Note)	1,269	—
Other	21	8
Total	8,774	7,549

(Note) Foreign exchange loss include losses on valuation of currency derivatives.

29. Other Comprehensive Income

Reclassification adjustments of other comprehensive income

Reclassification adjustments and tax effects of other comprehensive income by component are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Items that will not be reclassified to profit or loss:		
Remeasurements of defined benefit plans		
Amount incurred during the period	(3,991)	(496)
Tax effect	788	162
After tax effect	(3,203)	(334)
Equity financial assets measured at fair value through other comprehensive income		
Amount incurred during the period	(204)	(429)
Tax effect	27	99
After tax effect	(177)	(330)
Total of items that will not be reclassified to profit or loss	(3,380)	(664)
Items that may be reclassified subsequently to profit or loss:		
Exchange differences on translation of foreign operations		
Amount incurred during the period	(18,033)	(64,290)
Reclassification	—	—
Before tax effect	(18,033)	(64,290)
Tax effect	—	—
After tax effect	(18,033)	(64,290)
Cash flow hedges		
Amount incurred during the period	5,614	—
Before tax effect	5,614	—
Tax effect	—	—
After tax effect	5,614	—
Total of items that may be reclassified subsequently to profit or loss	(12,419)	(64,290)
Total other comprehensive income	(15,799)	(64,954)

30. Earnings Per Share

Basic earnings (loss) per share attributable to owners of parent and diluted earnings (loss) per share are as follows.

(1) Basic earnings (loss) per share

	The year ended December 31, 2019	The year ended December 31, 2020
Profit (loss) attributable to owners of parent used for the calculation of basic earnings per share (million yen)	(6,317)	45,626
Profit (loss) from continuing operations (million yen)	(6,317)	45,626
Profit from discontinued operations (million yen)	—	—
Weighted average number of ordinary shares during the year (thousands of shares)	1,694,151	1,719,345
Basic earnings (loss) per share (yen)	(3.73)	26.54
Continuing operations (yen)	(3.73)	26.54
Discontinued operations (yen)	—	—

(2) Diluted earnings (loss) per share

	The year ended December 31, 2019	The year ended December 31, 2020
Profit (loss) attributable to owners of parent used for the calculation of basic earnings per share (million yen)	(6,317)	45,626
Adjustments on earnings (million yen)	—	—
Profit (loss) used for the calculation of diluted earnings per share (million yen)	(6,317)	45,626
Profit (loss) from continuing operations (million yen)	(6,317)	45,626
Profit (loss) from discontinued operations (million yen)	—	—
Weighted average number of ordinary shares during the year before dilution (thousands of shares)	1,694,151	1,719,345
Increase in ordinary shares due to warrants (thousands of shares)	—	37,701
Weighted average number of ordinary shares during the year after dilution (thousands of shares)	1,694,151	1,757,045
Diluted earnings (loss) per share (yen)	(3.73)	25.97
Continuing operations (yen)	(3.73)	25.97
Discontinued operations (yen)	—	—

(Note) 1. The diluted loss per share for the fiscal year ended December 31, 2019 is the same amount as the basic loss per share due to the absence of residual equity with a dilutive effect.

2. For the fiscal year ended December 31, 2019, since the warrants the Company issues do not have a dilutive effect, these are not included in the calculation for diluted loss per share (yen).

31. Consolidated Statement of Cash Flows

(1) Changes in liabilities in financing activities

The components of liabilities in financing activities and their changes during the fiscal year are as follows.

(For the year ended December 31, 2019)

(In millions of yen)

	As of December 31, 2018	Adjustment due to adoption of IFRS16	As of January 1, 2019	Cash flows	Non-cash transactions			As of December 31, 2019
					Acquisitions	Increase due to business combination	Other (Note 2)	
Long-term borrowings (Note 1)	147,248	—	147,248	629,355	—	—	(4,856)	771,747
Short-term borrowings	45,000	—	45,000	(45,000)	—	—	—	—
Bonds	—	—	—	(65,409)	—	65,262	159	12
Lease liabilities	2,762	13,102	15,864	(5,726)	2,826	1,234	(43)	14,155
Total	195,010	13,102	208,112	513,220	2,826	66,496	(4,740)	785,914

(For the year ended December 31, 2020)

(In millions of yen)

	As of December 31, 2019	Cash flows	Non-cash transactions			As of December 31, 2020
			Acquisitions	Increase due to business combination	Other (Note 2)	
Long-term borrowings (Note 1)	771,747	(93,295)	—	—	1,281	679,733
Short-term borrowings	—	—	—	—	—	—
Bonds	12	—	—	—	(1)	11
Lease liabilities	14,155	(4,840)	5,593	—	(931)	13,977
Total	785,914	(98,135)	5,593	—	349	693,721

(Note) 1. Current portion of long-term borrowings are included in long-term borrowings.
2. Non-cash transactions for long-term borrowings includes the arrangement fees.

(2) Non-cash transactions

Significant non-cash transactions are as follows.

(In millions of yen)

Type	The year ended December 31, 2019	The year ended December 31, 2020
Purchase of intangible assets through installment purchase contracts	205	35,569

(3) Principal assets and liabilities of a company that became a consolidated subsidiary due to acquisition of stock

(For the year ended December 31, 2019)

For details of the breakdown of assets and liabilities for IDT and its subsidiaries at time of its consolidation resulting from the acquisition of stock as well as the relationship between the acquisition price of stock and expenditures (net) for its acquisition, see “Note 7. Business Combinations.”

32. Share-based Payments

(1) Overview of the share-based payment plan

The Company has adopted a share-based payment plan (hereafter "the stock option plan") as an incentive plan for directors (excluding outside directors), senior vice presidents and employees.

Under the stock option plan, warrants have been granted to eligible persons in accordance with the resolution of the Board of Directors of the Company based on the arrangement approved at the shareholders meeting of the Company. The exercise period of the stock options is set by an allotment contract, and if they are not exercised during the exercise period, the stock options will lapse. In addition, if an eligible person has left the Company before the vesting date, the options will also lapse. However, this does not apply to certain cases addressed in the warrants allotment contract, such as resignation due to the expiration of the term of office.

The stock option plan of the Company is accounted for as equity-settled share-based payments.

(2) Share-based payment plan

The share-based payment plan in effect during the current fiscal year is as follows.

	Category and number of grantees	Type of stock and number of shares	Grant date	Vesting conditions	Vesting period	Exercise period
Fiscal year 2016 Stock options No.1 No.2 No.3	Directors of the Company 2 Corporate officers and executive officers of the Company 10	Common stock 288,500 shares	August 1, 2016	The rights will vest in stages as follows. One third will vest on August 2, 2017 One third will vest on August 2, 2018 The remaining will vest on August 2, 2019	From August 1, 2016 to August 2, 2019	From August 2, 2016 to August 1, 2026
Fiscal year 2017 Stock options No.1 – 1 No.2 – 1	Directors of the Company 2 Corporate officers and executive officers of the Company 11 Employees of the Company 342 Directors of subsidiaries 20 Employees of subsidiaries 890	Common stock 3,549,500 shares	April 3, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From April 3, 2017 to April 4, 2020	From April 4, 2017 to April 3, 2027
Fiscal year 2017 Stock options No.1 – 2 No.2 – 2	Directors of the Company 2 Corporate officers and executive officers of the Company 11 Employees of the Company 78	Common stock 2,112,000 shares	April 3, 2017	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From April 3, 2017 to April 3, 2020	From April 4, 2017 to April 3, 2027

	Directors of subsidiaries 14 Employees of subsidiaries 59					
Fiscal year 2017 Stock options No.3	Employees of subsidiaries 7	Common stock 30,900 shares	May 11, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From May 11, 2017 to April 4, 2020	From May 12, 2017 to May 11, 2027
Fiscal year 2017 Stock options No.4	Employees of subsidiaries 13	Common stock 52,200 shares	July 12, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From July 12, 2017 to April 4, 2020	From July 13, 2017 to July 12, 2027
Fiscal year 2017 Stock options No.5 No.6	Employees of subsidiaries 20	Common stock 98,000 shares	September 14, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From September 14, 2017 to April 4, 2020	From September 15, 2017 to September 14, 2027
Fiscal year 2017 Stock options No.7	Employees of subsidiaries 16	Common stock 94,000 shares	October 12, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From October 12, 2017 to April 4, 2020	From October 13, 2017 to October 12, 2027
Fiscal year 2017 Stock options No.8	Employees of subsidiaries 26	Common stock 117,300 shares	January 15, 2018	The rights will vest in stages as follows Certain amount will vest on April 4, 2018 Certain amount will vest on April 4, 2019 Certain amount will vest on April 4, 2020 The remaining will vest on April 4, 2021	From January 15, 2018 to April 4, 2021	From January 16, 2018 to January 15, 2028
Fiscal year 2018 Stock options No.1 – 1 No.2 – 1	Directors of the Company 3 Corporate officers and executive officers of the Company 10 Employees of the Company 472	Common stock 3,607,200 shares	April 2, 2018	The rights will vest in stages as follows One third will vest on April 3, 2019 One third will vest on April 3, 2020 The remaining will vest on April 3, 2021	From April 2, 2018 to April 3, 2021	From April 3, 2018 to April 2, 2028

	Directors of subsidiaries 18 Employees of subsidiaries 743					
Fiscal year 2018 Stock options No.1 – 2 No.2 – 2	Directors of the Company 3 Corporate officers and executive officers of the Company 10 Employees of the Company 95 Directors of subsidiaries 13 Employees of subsidiaries 47	Common stock 2,047,200 shares	April 2, 2018	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From April 2, 2018 to April 2, 2021	From April 3, 2018 to April 2, 2028
Fiscal year 2018 Stock options No.3 No.4	Employees of the Company 257 Directors of subsidiaries 1 Employees of subsidiaries 181	Common stock 534,600 shares	July 31, 2018	The rights will vest in stages as follows One third will vest on April 3, 2019 One third will vest on April 3, 2020 The remaining will vest on April 3, 2021	From July 31, 2018 to April 3, 2021	From August 1, 2018 to July 31, 2028
Fiscal year 2018 Stock options No.5	Employees of subsidiaries 22	Common stock 182,700 shares	October 31, 2018	The rights will vest in stages as follows Certain amount will vest on April 3, 2019 Certain amount will vest on April 3, 2020 Certain amount will vest on April 3, 2021 The remaining will vest on April 3, 2022	From October 31, 2018 to April 3, 2022	From November 1, 2018 to October 31, 2028
Fiscal year 2019 Stock options No.1 No.2 No.3	Corporate officers and executive officers of the Company 1 Directors of subsidiaries 1 Corporate officers and executive officers of subsidiaries 3	Common stock 57,043,500 shares	April 9, 2019	According to completion of the acquisitions with IDT, the existing stock options for IDT allocated to directors of IDT and its subsidiaries, corporate officers and executive officers of subsidiaries, and employees of subsidiaries are converted into the stock options for the Company and issued. The rights are based on the vesting periods for the stock option originally scheduled in IDT.	From April 9, 2019 to March 15, 2023	From April 9, 2019 to April 8, 2029

	Employees of subsidiaries 1,337					
Fiscal year 2019 Stock options No.4 – 1 No.5 – 1	Corporate officers and executive officers of the Company 1 Employees of the Company 1 Employees of subsidiaries 32	Common stock 659,800 shares	May 31, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From May 31, 2019 to April 1, 2022	From June 1, 2019 to May 31, 2029
Fiscal year 2019 Stock options No.4 – 2 No.5 – 2	Corporate officers and executive officers of the Company 1 Employees of the Company 1	Common stock 364,300 shares	May 31, 2019	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From May 31, 2019 to April 2, 2022	From June 1, 2019 to May 31, 2029
Fiscal year 2019 Stock options No.6 – 1 No.7 – 1	Employees of the Company 486 Directors of subsidiaries 15 Employees of subsidiaries 1,875	Common stock 16,222,700 shares	July 25, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From July 25, 2019 to April 1, 2022	From July 26, 2019 to July 25, 2029
Fiscal year 2019 Stock options No.6 – 2 No.7 – 2	Employees of the Company 90 Directors of subsidiaries 10 Employees of subsidiaries 46	Common stock 3,203,800 shares	July 25, 2019	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From July 25, 2019 to April 2, 2022	From July 26, 2019 to July 25, 2029
Fiscal year 2019 Stock options No.8 – 1 No.9 – 1	Directors of the Company 2 Corporate officers and executive officers of the Company 12	Common stock 985,900 shares	August 23, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From August 23, 2019 to April 1, 2022	From August 24, 2019 to August 23, 2029

	Employees of the Company 2					
Fiscal year 2019 Stock options No.8 – 2 No.9 – 2	Directors of the Company 2 Corporate officers and executive officers of the Company 12	Common stock 1,963,800 shares	August 23, 2019	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From August 23, 2019 to April 2, 2022	From August 24, 2019 to August 23, 2029
Fiscal year 2019 Stock options No.10	Employees of subsidiaries 441	Common stock 351,600 shares	September 20, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From September 20, 2019 to April 1, 2022	From September 21, 2019 to September 20, 2029
Fiscal year 2019 Stock options No.11 – 1 No.12 – 1	Corporate officers and executive officers of the Company 1 Employees of the Company 122 Employees of subsidiaries 123	Common stock 887,700 shares	October 31, 2019	The rights will vest in stages as follows Certain amount will vest on April 1, 2020 Certain amount will vest on April 1, 2021 Certain amount will vest on April 1, 2022 The remaining will vest on April 1, 2023	From October 31, 2019 to April 1, 2023	From November 1, 2019 to October 31, 2029
Fiscal year 2019 Stock options No.11 – 2 No.12 – 2	Corporate officers and executive officers of the Company 1 Employees of subsidiaries 1	Common stock 73,800 shares	October 31, 2019	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From October 31, 2019 to April 2, 2023	From November 1, 2019 to October 31, 2029
Fiscal year 2019 Stock options No.13	Employees of subsidiaries 15	Common stock 204,800 Shares	December 25, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From December 25, 2019 to April 1, 2022	From December 26, 2019 to December 25, 2029
Fiscal year 2019 Stock options No.14	Employees of subsidiaries 23	Common stock 210,000 Shares	January 31, 2020	The rights will vest in stages as follows Certain amount will vest on April 1, 2020	From January 31, 2020 to April 1, 2023	From February 1, 2020 to January 31, 2030

				Certain amount will vest on April 1, 2021 Certain amount will vest on April 1, 2022 The remaining will vest on April 1, 2023		
Fiscal year 2020 Stock options No.1 – 1 No.2 – 1	Directors of the Company 4 Corporate officers and executive officers of the Company 10 Employees of the Company 467 Directors of subsidiaries 14 Employees of subsidiaries 1,888	Common stock 17,068,000 Shares	June 30, 2020	The rights will vest in stages as follows One third will vest on July 1, 2021 One third will vest on July 1, 2022 The remaining will vest on July 1, 2023	From June 30, 2020 to July 1, 2023	From July 1, 2020 to June 30, 2030
Fiscal year 2020 Stock options No.1 – 2 No.2 – 2	Directors of the Company 1 Corporate officers and executive officers of the Company 10 Employees of the Company 88 Directors of subsidiaries 9 Employees of subsidiaries 41	Common stock 5,211,600 Shares	June 30, 2020	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From June 30, 2020 to June 30, 2023	From July 1, 2020 to June 30, 2030
Fiscal year 2020 Stock options No.3 No.4	Directors of the Company 1 Corporate officers and executive	Common stock 4,725,300 Shares	August 31, 2020	The rights will vest in stages as follows One third will vest on August 31, 2020 One third will vest on September 1, 2020	From August 31, 2020 to October 31, 2020	From August 31, 2020 to August 30, 2030
	officers of the Company 8 Employees of the Company 916			The remaining will vest on October 1, 2020		

	Directors of subsidiaries 6 Employees of subsidiaries 1,614					
Fiscal year 2020 Stock options No.5 No.6	Employees of the Company 219 Employees of subsidiaries 161	Common stock 665,800 Shares	August 31, 2020	The rights will vest in stages as follows One third will vest on September 1, 2021 One third will vest on September 1, 2022 The remaining will vest on September 1, 2023	From August 31, 2020 to September 1, 2023	From September 1, 2020 to August 31, 2030
Fiscal year 2020 Stock options No.7 – 1 No.8 – 1	Employees of the Company 3 Employees of subsidiaries 94	Common stock 910,100 Shares	November 30, 2020	The rights will vest in stages as follows Certain amount will vest on July 1, 2021 Certain amount will vest on July 1, 2022 Certain amount will vest on July 1, 2023 The remaining will vest on July 1, 2024	From November 30, 2020 to July 1, 2023	From December 1, 2020 to November 30, 2030
Fiscal year 2020 Stock options No.7 – 2 No.8 – 2	Employees of subsidiaries 10	Common stock 82,000 Shares	November 30, 2020	The rights will vest in stages as follows One third will vest on September 1, 2021 One third will vest on September 1, 2022 The remaining will vest on September 1, 2023	From November 30, 2020 to September 1, 2023	From December 1, 2020 to November 30, 2030
Fiscal year 2020 Stock options No.7 – 3	Employees of the Company 1	Common stock 22,600 Shares	November 30, 2020	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From November 30, 2020 to June 30, 2023	From December 1, 2020 to November 30, 2030

(Note) 1. Vesting conditions include a requirement for award beneficiaries to provide services to the Company until the stock vesting date. However, this does not apply to certain cases such as mandatory retirement, resignation due to the expiration of the term of office or the other justifiable reasons.

2. Grantees cannot exercise options during the time from the day after the grant date until when the stock is vested. Also, the option will be forfeited if the target retires or resigns from the Company or subsidiary by the vesting date. However, if allowed under the Stock Acquisition Rights Allocation Agreement, those options may be exercised. For example, if awards are not forfeited upon retirement or resignation due to the expiration of terms of office under the Stock Acquisition Rights Allocation Agreement, the said person may exercise the said stock options starting on the day following said loss of eligibility until 13 months after.

3. If grantees forfeit their share acquisition rights, they may not exercise their stock options.

(3) Number and weighted average exercise price of stock options

Changes of the number and the weighted average exercise price of stock options granted in the prior fiscal year and the current fiscal year are as follows. The number of stock options is stated by converting them to the number of shares.

	The year ended December 31, 2019		The year ended December 31, 2020	
	Number of options (shares)	Weighted average exercise price (yen)	Number of options (shares)	Weighted average exercise price (yen)
Beginning balance of unexercised options	10,854,400	1	47,457,400	1
Granted	81,961,700	1	28,895,400	1
Exercised	41,891,400	1	21,622,200	1
Forfeited	3,357,800	1	4,586,700	1
Expired	109,500	1	191,300	1
Ending balance of unexercised options	47,457,400	1	49,952,600	1
Ending balance of exercisable options	2,486,800	1	5,320,000	1

(Note) 1. For the stock options exercised during the period, the weight average share price as of the exercise date was 597 yen for the fiscal year ended December 31, 2019 and 712 yen for the fiscal year ended December 31, 2020.

2. Remaining weighted average contractual life outstanding at the end of the prior fiscal year and the current fiscal year was 4 years, respectively.

(4) Fair value of stock options granted and estimation method of fair value

The valuation techniques used for the stock options granted for the fiscal year ended December 31, 2019 and the fiscal year ended December 31, 2020 are the Binomial model, and the major basic assumptions and estimation method are as follows.

Date of grant	Fair value per share at the grant date (yen)	Share price on date of grant (yen)	Exercise price (yen)	Expected volatility (Note 1)	Expected holding period (Note 2)	Expected dividend (Note 3)	Risk-free interest rate (Note 4)
April 2019	511	512	1	46.525%	5 years	No dividend	(0.202%)
May 2019	494	495	1	43.038%	5 years	No dividend	(0.203%)
	294 (Note 5)						
July 2019	638	639	1	43.200%	5 years	No dividend	(0.235%)
	381 (Note 5)						
August 2019	629	630	1	42.800%	5 years	No dividend	(0.323%)
	399 (Note 5)						
September 2019	660	661	1	42.469%	5 years	No dividend	(0.346%)
October 2019	739	740	1	42.188%	5 years	No dividend	(0.269%)
	469 (Note 5)						
December 2019	753	754	1	42.194%	5 years	No dividend	(0.116%)
January 2020	710	711	1	42.040%	5 years	No dividend	(0.182%)
June 2020	550	551	1	50.700%	5 years	No dividend	(0.100%)
	346 (Note 5)						
August 2020	666	667	1	51.210%	5 years	No dividend	(0.067%)
November 2020	927	928	1	50.393%	5 years	No dividend	(0.105%)
	583 (Note 5)						

(Note) 1. The expected volatility is calculated using the actual share prices during the expected holding period from the grant date.
2. The expected holding period is based on the number of years from the grant date to the last day of the principle exercise period.
3. The expected dividend is calculated based on the actual annual dividend for the year.
4. The risk-free interest rate is the yield on Japanese government bonds for the period that corresponds to the remaining life of the option.
5. For the stock options whose vesting condition is the stock price requirement, the actual rates of granted stocks are reflected on the fair value based on the results of comparing the fluctuation rate of the Company's stock with that of stock indexes over a certain period.

(5) Share-based payment expenses

Share-based payment expenses included in the consolidated statement of profit or loss totaled 827 million yen in "Cost of sales" and 10,927 million yen in "Selling, general and administrative expenses" in the previous fiscal year, and 1,234 million yen in "Cost of sales" and 13,323 million yen in "Selling, general and administrative expenses" in the current fiscal year.

33. Financial Instruments

(1) Capital management

The Group aims to achieve sustainable growth and maximize its corporate value. Investments of surplus funds are limited to short-term deposits and financial assets with a high level of safety. Regarding financing sources, the Group mainly uses borrowings from banks. The Group mainly uses derivative financial instruments to manage fluctuations in foreign currency exchange rates, and the Group's policies prohibit holding or issuing derivative financial instruments for speculative transactions. Items subject to management are net interest-bearing liabilities obtained by deducting cash and cash equivalents from interest-bearing liabilities and equity. Their balances and the major indicators that the Group uses for its capital management are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Interest-bearing liabilities	785,914	693,721
Less: Cash and cash equivalents	(146,468)	(219,786)
Net interest-bearing liabilities	639,446	473,935
Equity	621,455	616,701
Equity ratio (%)	37.3	38.3

Equity: Total equity attributable to owners of parent
Equity ratio: Equity/Total liabilities and equity

(2) Basic policies for financial risk management

The Group is exposed to financial risks (credit risk, liquidity risk and market risk) in the process of executing its business activities. Accordingly, the Group regularly monitors the financial risks based on internal management regulations and takes measures to avoid or reduce the risks as required.

The Group does not engage in derivative transactions for speculative purposes.

A. Credit risk

(a) Credit risk management

Notes and trade receivables are exposed to the credit risk of customers. Conforming to the internal rules for the management of receivables, the Group regularly monitors major customers' credit and manages the due dates of collection and the balance for each customer. Other receivables are exposed to the credit risk of customers, but most of them are settled in the short term. Short-term investments are financial assets invested on a short-time basis, and the Group transacts with highly creditworthy financial institutions. Trade receivables are regarded as non-performing if all or part of them cannot be collected or if collection is deemed extremely difficult. The Group does not have any exposure to the significant credit risk of certain customers, and there is no excessive concentration of credit risk that requires special management.

The largest exposure to credit risk at the end of the reporting period is the carrying amount of financial assets after impairment, but there is no historical experience of recognizing a significant credit loss in previous years.

Regarding debt guarantees, the balance of debt guarantees presented in “Note 36. Commitments and Contingencies” is the largest exposure of the Group to credit risk.

(b) Analysis of changes in loss allowance

The changes in the loss allowance are as follows.

(In millions of yen)

	The year ended December 31, 2019				The year ended December 31, 2020			
	Loss allowance for financial instruments other than trade receivables (12-month expected credit losses)	Loss allowance for trade receivables (lifetime expected credit losses)	Loss allowance for financial instruments whose credit risk has increased significantly (lifetime expected credit losses)	Loss allowance for financial instruments whose credit is impaired (lifetime expected credit losses)	Loss allowance for financial instruments other than trade receivables (12-month expected credit losses)	Loss allowance for trade receivables (lifetime expected credit losses)	Loss allowance for financial instruments whose credit risk has increased significantly (lifetime expected credit losses)	Loss allowance for financial instruments whose credit is impaired (lifetime expected credit losses)
Beginning balance	—	48	—	—	—	95	—	—
Increases	—	103	—	—	—	58	—	—
Decreases due to reversal	—	(55)	—	—	—	(31)	—	—
Other	—	(1)	—	—	—	(3)	—	—
Ending balance	—	95	—	—	—	119	—	—

(Note) Acquisition by business combination is included in "Increases."

(c) Carrying amount of financial instruments for the loss allowance

The carrying amount (before the loss allowance) of financial instruments for the loss allowance on the transition date and as of each fiscal year end is as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Financial instruments other than trade receivables (12-month expected credit losses)	3,081	4,751
Trade receivables (lifetime expected credit losses)	81,473	77,686
Financial instruments whose credit risk has increased significantly (lifetime expected credit losses)	—	—
Financial instruments whose credit is impaired (lifetime expected credit losses)	—	—

(d) Analysis of credit risk

The aging analysis of trade receivables on the transition date and as of each fiscal year end is as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Before due date	76,198	75,210
Up to 30 days past due	4,579	1,916
Over 30 days past due and up to 90 days past due	696	240
Over 90 days past due	—	320
Total	81,473	77,686

For trade receivables, the Group's major counterparties consist of specific distributors with high credit ratings and there is no material balance of loss allowance based on expected loss rate. For financial instruments other than trade receivables, there is no credit risk that is concentrated around credit ratings.

B. Liquidity risk

The Group is exposed to liquidity risk whereby the performance of payment obligations could become difficult. To limit its exposure to liquidity risk, however, the Group works to maintain fund management through the optimization of capital efficiency through the efficient management of working capital and the central management of funds by the Company. The Group also manages the liquidity risk by appropriately maintaining liquidity on hand through the timely preparation and updating of the financing plan and taking the external financial environment into account.

The balance of financial liabilities by due date is as follows.

As of December 31, 2019

(In millions of yen)

	Carrying amount	Contractual cash flows	Due within one year	Due after one year but within two years	Due after two years but within three years	Due after three years but within four years	Due after four years but within five years	Due after five years
Non-derivative financial liabilities								
Trade and other payables	101,032	101,032	100,187	584	261	—	—	—
Bonds and borrowings	771,759	797,931	99,265	98,474	97,712	96,941	405,539	—
Lease liabilities	14,155	15,840	4,486	2,620	2,083	1,816	1,484	3,351
Other	300	300	—	300	—	—	—	—
Total	887,246	915,103	203,938	101,978	100,056	98,757	407,023	3,351

As of December 31, 2020

(In millions of yen)

	Carrying amount	Contractual cash flows	Due within one year	Due after one year but within two years	Due after two years but within three years	Due after three years but within four years	Due after four years but within five years	Due after five years
Non-derivative financial liabilities								
Trade and other payables	139,412	139,412	114,235	11,695	10,979	2,503	—	—
Bonds and borrowings	679,744	698,762	98,560	97,777	96,994	405,431	—	—
Lease liabilities	13,977	14,487	3,927	3,388	2,278	1,738	1,365	1,791
Other	300	300	—	300	—	—	—	—
Total	833,433	852,961	216,722	113,160	110,251	409,672	1,365	1,791

C. Market risk

(a) Foreign currency exchange risk

(i) Foreign currency exchange risk management

Foreign currency receivables and obligations arising from the global business development of the Group are exposed to the risk of foreign exchange rate fluctuations. To reduce the risk of foreign exchange rate fluctuations, the Group uses forward exchange contracts, currency options and currency swaps.

(ii) Net foreign exchange risk exposure

The Group's exposure to the risk of foreign exchange rate fluctuations (net amount) is as follows. This excludes derivative transactions and the amount entered into to hedge foreign exchange rate fluctuation risk using foreign currency deposits.

(In millions of yen)

Currency	The year ended December 31, 2019	The year ended December 31, 2020
US dollar	37,452	27,602
Euro	13,976	21,600

(iii) Sensitivity analysis of foreign exchange rates

Based on the assumption that all other variables are constant for foreign currency financial instruments held by the Group in the previous fiscal year and the current fiscal year, the amount of the impact of the 1.0% appreciation of the yen against the US dollar and the euro on profit before tax in the consolidated statement of profit or loss is as follows.

(In millions of yen)

Currency	The year ended December 31, 2019	The year ended December 31, 2020
US dollar	(375)	(276)
Euro	(140)	(216)

(b) Interest rate risk

Although the Group raises funds through borrowings for the purpose of securing funds for long-term working capital and the promotion of growth strategies, the Group is exposed to the risk of interest rate fluctuations because some borrowings are made at floating interest rates. To reduce the risk of changes in the interest paid on borrowings, the Group uses interest rate swaps as required. Accordingly, the Group has decided that the impact of the risk of interest rate fluctuations on the Company is limited and insignificant and does not conduct a sensitivity analysis for interest rate risk.

(c) Stock price risk

The Group has adopted an incentive plan for its employees for the purpose of securing excellent human resources, particularly at subsidiaries. To operate the incentive plan, the Group holds shares and other financial instruments for the long term and is exposed to the risk of changes in their market prices. Please note that, following the introduction of a stock option plan, the incentive plan was abolished and there was no new issuance.

The Group does not conduct a sensitivity analysis for the risk of changes in share prices since the impact of changes in share prices are immaterial.

(3) Fair value of financial instruments

A. Calculation method of fair value

The calculation method of the fair value of financial instruments is as follows.

(a) Cash and cash equivalents, and trade and other receivables

The fair value of these instruments approximates their carrying amount due to short term maturities.

(b) Trade and other payables

For trade and other payables that will mature within a relatively short amount of time, the fair value approximates the carrying amount. The fair value of trade and other payables that will not mature in a short amount of time is calculated by the present value that is discounted by an interest rate assumed for the case where a similar borrowing is newly made and classified as Level 2.

(c) Securities

If the market price of a security is available in an active market, the securities are measured using this market price and classified as Level 1. If the market price is not available, the fair value is measured mainly by a method based on net assets (method of calculating by making adjustments to the market value as required based on the net assets of the entity that issues shares), etc. and classified as Level 3.

(d) Long-term borrowings

The fair value of long-term borrowings is calculated at the present value that is discounted using an interest rate assumed for the case where a similar borrowing is newly made and classified as Level 2.

(e) Derivative transactions

Currency options and currency swaps are calculated based on the price presented by the customers' financial institution and classified as Level 2.

(f) Bonds

The fair value of bonds acquired in a business combination is calculated by referring to a market price and classified as Level 2.

(g) Other financial assets and liabilities

Time deposits with maturities of more than three months, long-term accounts receivable, security deposits and guarantee deposits received that are measured at amortized cost are classified as Level 2. Because their fair value approximates their carrying amount, they are omitted from the following table.

B. Classification of financial instruments measured at fair value by levels

In the fair value hierarchy, financial instruments are classified from Level 1 to Level 3 as follows.

Level 1: Fair value measured using unadjusted quoted prices in the active markets

Level 2: Fair value other than quoted prices include within Level 1 that are observable, either directly or indirectly

Level 3: Fair value calculated by using a valuation technique including inputs that are not based on observable market data

Transfers between the levels in the fair value hierarchy are recognized on the assumption that the transfers occur at the end of each reporting period. There is no transfer between levels.

(a) Financial instruments measured at amortized cost

The carrying amount and the fair value of financial instruments measured at amortized cost are as follows. Financial instruments measured at fair value and financial instruments whose carrying amount closely approximates fair value are not included in the table below.

As of December 31, 2019

(In millions of yen)

	Carrying amount	Fair value			
		Level 1	Level 2	Level 3	Total
Financial liabilities					
Borrowings	771,747	—	776,736	—	776,736
Bonds	12	—	12	—	12
Other payables	16,974	—	16,934	—	16,934
Total	788,733	—	793,682	—	793,682

As of December 31, 2020

(In millions of yen)

	Carrying amount	Fair value			
		Level 1	Level 2	Level 3	Total
Financial liabilities					
Borrowings	679,733	—	680,962	—	680,962
Bonds	11	—	11	—	11
Other payables	47,433	—	46,736	—	46,736
Total	727,177	—	727,709	—	727,709

(b) Financial instruments measured at fair value

The components of financial assets and financial liabilities measured at fair value on a recurring basis that are classified as each level of the fair value hierarchy are as follows.

As of December 31, 2019

(In millions of yen)

	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss				
Investment trust	3,967	—	—	3,967
Unlisted securities	—	—	1,258	1,258
Equity instruments measured at fair value through other comprehensive income				
Unlisted securities	—	—	2,668	2,668
Total	3,967	—	3,926	7,893

As of December 31, 2020

(In millions of yen)

	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss				
Investment trust	4,160	—	—	4,160
Unlisted securities	—	—	2,498	2,498
Equity instruments measured at fair value through other comprehensive income				
Unlisted securities	—	—	2,242	2,242
Total	4,160	—	4,740	8,900

C. Changes in financial assets that are classified as Level 3 are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Beginning balance	1,245	3,926
Total gains or losses in the period	(21)	674
Profit or loss (Note 1)	119	1,103
Other comprehensive income (Note 2)	(140)	(429)
Purchases	—	140
Sales	(60)	—
Settlement	—	—
Acquisition due to business combination	2,816	—
Other	(54)	—
Ending balance	3,926	4,740

Changes in financial liabilities that are classified as Level 3 are as follows.

(In millions of yen)

	The year ended December 31, 2019	The year ended December 31, 2020
Beginning balance	—	—
Total gains or losses in the period	(67)	—
Profit or loss (Note 1)	(67)	—
Other comprehensive income	—	—
Purchases	—	—
Sales	—	—
Settlement	(222)	—
Acquisition due to business combination	294	—
Other	(5)	—
Ending balance	—	—

(Note) 1. Total gains or losses in the period are for financial assets and liabilities measured at fair value through profit or loss and included in finance income and finance costs in the consolidated statement of profit or loss.

2. Total gains or losses in the period are all for equity instruments measured at fair value through other comprehensive income at the end of the reporting period and presented in "Equity instruments measured at fair value through other comprehensive income" in the consolidated statement of comprehensive income.

3. Financial instruments that are classified as Level 3 consist of unlisted securities. The fair value of unlisted securities is measured by the responsible department in the Group according to the Group accounting policies, etc., using the immediately preceding available figure in each quarter. The measurement results of the fair value are reviewed and approved by an appropriate authorized person. For the financial instruments classified as Level 3, the Group does not expect that there will be any significant change in the fair value amount even if the assumptions used are changed within a reasonable range.

(4) Derivative transactions and hedging activities

A. Overview of hedges

The Group uses forward exchange contracts, currency options and currency swaps for the purpose of hedging transactions against the risk of foreign exchange rate fluctuations in foreign currency cash flows. Hedge accounting is applied to those transactions that meet the requirements for hedge accounting. Even if the requirements for hedge accounting are not met, the Group uses derivative transactions if they are economically reasonable. Changes in the fair value of the derivative transactions are recognized in profit or loss. The Group has also set a policy of not engaging in derivative transactions for speculative purposes.

Cash flow hedges

Cash flow hedges are hedges to avoid the risk of changes in future cash flows, and changes in the fair value of derivative transactions that are designated as cash flow hedges are recognized in other comprehensive income. The amount that is recognized in accumulated other comprehensive income is reclassified to profit or loss at the time when the hedged transactions affect profit or loss. If the hedged items give rise to the recognition of non-financial assets or non-financial liabilities, the amount that is recognized in other comprehensive income is reclassified as an adjustment to the initial carrying amount of non-financial assets or non-financial liabilities. Derivatives that are designated as cash flow hedges include forward exchange contracts, currency options and currency swaps to hedge the risk of changes in cash flows due to changes in the foreign exchange rates for foreign currency transactions.

In the previous fiscal year and the current fiscal year, no amount was recognized in profit or loss for the hedge ineffectiveness portion and the portion that was excluded from the assessment of hedge effectiveness.

B. Information on items that are designated as hedging instruments

The impact of hedging instruments that are designated as hedges on the consolidated statement of financial position is as follows. Derivative assets and liabilities are included in "Other financial assets" and "Other financial liabilities," respectively, in the consolidated statement of financial position.

As of December 31, 2019 and December 31, 2020

Not applicable.

C. Information on items designated as hedged items

The amount of the impact of hedged items that are designated as hedges on the consolidated statement of financial position is as follows.

As of December 31, 2019 and December 31, 2020

Not applicable.

D. Impact of the application of hedge accounting on the consolidated statement of profit and loss and the consolidated statement of comprehensive income

The impact of hedging instruments that are designated as cash flow hedges on the consolidated statement of profit and loss and the consolidated statement of comprehensive income is as follows.

(In millions of yen)

	Changes in the value of hedging instruments recognized in other comprehensive income (Note)	Ineffective portion recognized in profit or loss	Amount after basis adjustment to cash flow hedges (Note)
As of December 31, 2019			
Cash flow hedges			
Foreign currency exchange risk			
Currency options	—	—	—
Currency swaps	—	—	—
As of December 31, 2020			
Cash flow hedges			
Foreign currency exchange risk			
Currency options	—	—	—
Currency swaps	—	—	—

(Note) Amount before tax effect.

E. Fair value of derivatives to which hedge accounting is not applied

The fair value and contract amount, etc. of derivatives to which hedge accounting is not applied are as follows.

As of December 31, 2019 and December 31, 2020

Not applicable.

(5) Transfer of financial assets

Accelerating from restructuring to growth stage, the Group provides diversified financing to achieve these growth strategies and liquidates certain trade receivables by transferring receivables.

The expenses arising from transfer of trade receivables derecognized in their entirety were 54 million yen in the prior fiscal year and 40 million yen in the current fiscal year.

34. Transactions with Related Parties

(1) Transactions with related parties

Innovation Network Corporation of Japan, which was a principal shareholder of the Group, was established in July 2009 with the Japanese government as the principal shareholder, and the total amount of investments by the Japanese government accounts for 95% or more of the capital of Innovation Network Corporation of Japan. As a result, the Japanese government and the government-related entities have become related parties of the Group.

In addition, Innovation Network Corporation of Japan conducted a business divestiture in September 21, 2018 and newly created INCJ, Ltd.. INCJ, Ltd. succeeded to all of the Group's shares of Innovation Network Corporation of Japan and became a principal shareholder of the Group.

Between the Group and these related parties, there are neither significant transactions individually nor significant transactions on aggregate although not significant individually.

Furthermore, transactions with INCJ and other related parties are not applicable.

(2) Compensation to key management

Compensation paid to key management personnel is as follows.

(In millions of yen)

Category	The year ended December 31, 2019	The year ended December 31, 2020
Remuneration and bonuses	516	227
Share-based payments	91	292
Total	607	519

(Note) The exercise price and other key terms of share-based payment arrangements are as stated in "Note 32. Share-based Payments."

35. Major Subsidiaries

All subsidiaries are included in the scope of consolidation for our consolidated financial statements.

Major subsidiaries as of December 31, 2020 are as follows.

Company	Location	Descriptions of Principal Businesses	Percentage Ownership and Voting Interest (%) (Note 1)	
			The year ended December 31, 2019	The year ended December 31, 2020
Renesas Semiconductor Manufacturing Co., Ltd.	Hitachinaka, Ibaraki	Manufacturing and Engineering Service Companies	100.0	100.0
Renesas Electronics (China) Co., Ltd.	Beijing, China	Sales Companies	100.0	100.0
Renesas Electronics Hong Kong Limited	Hong Kong, China	Sales Companies	100.0	100.0
Renesas Electronics America Inc. (Note 3)	California, U.S.A.	Design, Applications, Manufacturing and Sales Companies	100.0	100.0
Renesas Electronics Europe Limited (England)	Buckinghamshire, UK	Design, Applications and Sales Companies	100.0	100.0
Renesas Electronics Europe GmbH (Germany)	Dusseldorf, Germany	Design, Applications and Sales Companies	100.0	100.0
Renesas Semiconductor (Beijing) Co., Ltd.	Beijing, China	Manufacturing and Engineering Service Companies	100.0	100.0
Renesas Semiconductor (Suzhou) Co., Ltd.	Suzhou, China	Manufacturing and Engineering Service Companies	100.0 (6.33) (Note 2)	100.0 (6.33) (Note 2)
Renesas International Operations Sdn. Bhd.	Selangor, Malaysia	Management of parts of consignment business of our Group companies	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)
Intersil Luxembourg S.a.r.l.	Luxembourg	Business Corporations and Others	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)
Renesas Electronics Canada Limited	Ontario, Canada	Engineering and Sales Companies	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)
Renesas Electronics (Penang) Sdn. Bhd.	Penang, Malaysia	Engineering, Manufacturing and Sales Companies	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)
Renesas Electronics Germany GmbH	Dresden, Germany	Engineering, Manufacturing and Sales Companies	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)
IDT Bermuda Ltd.	Bermuda	Business Corporations and Others	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)
GigPeak, Inc.	California, U.S.A.	Business Corporations and Others	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)

(Note) 1. Percentage ownership and voting interest are rounded down to the second decimal point.
2. Numbers in parentheses represent indirect voting rights.
3. On January 1, 2020 former IDT merged with former Renesas Electronics America Inc. in an absorption type merger and changed the trade name to Renesas Electronics America Inc.

There are no subsidiaries with significant non-controlling interests.

36. Commitments and Contingencies

(1) Commitments for the acquisition of assets

The Group's commitments for the acquisition of assets are as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Property, plant and equipment	3,608	4,267
Intangible assets	533	358
Total	4,141	4,625

(2) Loan commitments

The Group has entered into a contract for setting commitment lines with its main banks for the purpose of securing long-term working capital, and the balance of unused loans is as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Total amount of commitment lines	50,000	125,000
Balance of used loans	—	—
Balance of unused loans	50,000	125,000

(Note) The Company has concluded the Commitment Line Agreement as described below on July 13, 2020 for the purpose of securing flexible means of procuring financing in order to meet funding requirements for future business developments and to secure working capital, as well as to improve the stability of the Company's financial base. This agreement has been terminated on March 2, 2021.

A. Counterparties of agreement	MUFG Bank, Ltd., Mizuho Bank, Ltd., Sumitomo Mitsui Trust Bank, Limited., Resona Bank, Ltd.
B. Maximum loan amount	75 billion yen
C. Date of agreement	July 13, 2020
D. Term of agreement	Two years
E. Collateral and guarantee	No collateral or guarantees

(3) Debt guarantees

The Group provides debt guarantees against bank loans, etc. of its employees as follows.

(In millions of yen)

	As of December 31, 2019	As of December 31, 2020
Guarantees of employees' obligations	45	36
Total	45	36

(Guarantees of employees' obligations)

The Group provides guarantees for the housing loans of employees as part of its welfare program. If an employee cannot repay a housing loan covered by a debt guarantee, the Group must assume the obligation. These debt guarantees are secured by the houses of the employees.

(4) Others

As the Group conducts business worldwide, it is possible that the Group may become a party to lawsuits, investigation by regulatory authorities and other legal proceedings in various countries.

Though it is difficult to predict the outcome of the legal proceedings to which the Group is presently a party or to which it may become a party in future, the resolution of such proceedings may require considerable time and expense. There is a possibility that the Group's business, performance, financial condition, cash flow, reputation and creditability to have significant adverse effects by the outcome.

The Group records provision for loss on litigation for several cases written below to the extent possible to make a reasonable estimation. Additionally, the Group records loss on litigation for cases other than below, to prepare for payments regarding lawsuits against other companies and compensation for damages. Following the policy under IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" Article 92, the Group does not disclose detailed information of these cases since it is likely to lead the Group to an unfavorable position.

(Civil lawsuit related to the alleged patent infringement and trade secret violation)
The Group's subsidiary has been named as a defendant in a civil lawsuit in the United States related to the alleged patent infringement and trade secret violation. The Group's subsidiary has been named as a defendant in a lawsuit filed in November 2008 in the United States District Court for the Eastern District of Texas (hereafter "the Court of First Instance"). The Court of First Instance entered a final judgment in June 2016 against the Group in the amount of 77.3 million U.S. dollars; however, the Group's subsidiary immediately filed a notice of appeal at the Court of Appeals for the Federal Circuit (hereafter "the Court of Second Instance"). In July 2018, the Court of Second Instance rejected the judgement of the Court of First Instance for payment of compensation and conducted the retrial order at the Court of First Instance.

(Civil lawsuits related to the alleged violations of the competition law)
The Group has been named in the United Kingdom as a defendant in civil lawsuits related to possible violations of competition law involving smartcard chips brought by purchasers of such products. One of the cases was brought in July 2019 in the Senior Courts of England and Wales and is currently on progress. The other case was brought in September 2020 in the same court.

(Indemnification claim related to environmental pollution)
The Group's subsidiary in Taiwan has been subjected to requests for restitution for environmental pollution associated with a factory in Taiwan owned by the subsidiary's predecessor company.

Since June 2004, the Group's subsidiary has been notified that an other company reserved its right to seek indemnification from us for all costs associated with the remediation of the contamination related to environmental pollution found at a factory in Taiwan owned by the subsidiary's predecessor company, and the costs associated with the lawsuit as well as the costs relating to those retained environmental liabilities in a toxic tort class action lawsuit filed by ex-employees worked at the factory. Though the Group's subsidiary is not a defendant in the class action lawsuit, the claimant initiated arbitration proceedings against us related to all claims arising out of the contamination, including the remediation, the toxic tort claims, and attorneys' fees in December 2017, but afterward, the arbitration was ordered stayed by the arbitrator on a unilateral request by the claimant.

37. Government Grants

Government grants related to employment or other actions taken by the Group are recognized in profit or loss and deducted from cost of sales of 681 million yen and selling, general and administrative expenses of 1,471 million yen, respectively for the year ended December 31, 2020. In addition, government grants related to research and development are recognized in profit or loss. For details, please refer to "Note 26. Other Income."

38. Subsequent Events

Acquisition of Stock of Dialog Semiconductor Plc (hereafter "Dialog").

On February 8, 2021, the Company has reached an agreement with Dialog in the UK, on the terms of a recommended all-cash acquisition by the Company of the entire issued and to be issued share capital of Dialog, thereby making Dialog a wholly-owned subsidiary of the Company (the "Acquisition").

1) Purpose of the Acquisition

Dialog is an innovative provider of highly-integrated and power-efficient mixed-signal ICs for a broad array of customers within IoT, consumer electronics and high-growth segments of automotive and industrial end-markets. Centered around its low-power and mixed-signal expertise, Dialog brings a wide range of product offerings including battery and power management, power conversion, configurable mixed-signal (CMIC), LED drivers, custom mixed-signal ICs (ASICs) and automotive power management ICs (PMICs), wireless charging technology, and more. Dialog also offers broad and differentiated Bluetooth® Low Energy (BLE), WiFi and audio system-on-chips (SoCs) that deliver advanced connectivity for a wide range of applications; from smart home/building automation, wearables, to connected medical. All these systems complement and expand the Company's leadership portfolio in delivering comprehensive solutions to improve performance and efficiency in high-computing electronic systems.

The Acquisition demonstrates the Company's continued and unwavering commitment to further advance its solution offering. The complementary nature of the Companies' technological assets and the scale of the combined portfolios will enable the Company to build more robust and comprehensive solutions to serve high-growth segments of the IoT and automotive markets.

2) Overview of the acquiree

(1) Name	Dialog Semiconductor Plc
(2) Address	100 Longwater Avenue, Reading, RG2 6GP, United Kingdom
(3) Business description	Development, manufacturing and sales of analog ICs such as mixed-signal devices
(4) Capital amount	14,253 thousand USD (As of September 2020)
(5) Date of foundation / incorporation	February 1998

3) Acquisition Method

The Company will implement a scheme of arrangement pursuant to UK law. The scheme of arrangement is a method of acquisition whereby, with the agreement of Dialog, the Acquisition will be executed by obtaining approvals from Dialog shareholders and the Court. Through this method, the Company will acquire 100% of the issued and to be issued share capital of Dialog.

The Acquisition needs to be approved by an affirmative vote of a majority of the shareholders in attendance at a meeting of shareholders convened by the Court and the number of the voting rights held by such shareholders who approve the Acquisition needs to represent 75% or more of the total number of voting rights. In addition, approval must be obtained from the Court following the necessary regulatory clearances from the relevant countries including United States, China and Germany.

Number of shares to be acquired, acquisition price, and share ownership before and after the Acquisition are as follows.

(1) Number of shares owned before the Acquisition	0 share (Ownership ratio: 0.0%)
(2) Number of shares to be acquired	72,387,613 shares (Note) (Ratio to the number of issued shares: 100.0%)
(3) Acquisition Value	Approximately EUR 4,886 million (approximately 615.7 billion yen, calculated at 126 yen per euro)
(4) Number of shares owned after the Acquisition	72,387,613 shares (Ratio to the number of issued shares: 100.0%)

Note: The number of shares is on a fully-diluted basis as of December 31, 2020

4) Schedule

With the aforementioned conditions, the Acquisition is expected to become effective by the end of the fiscal year ending December 31, 2021.

5) Execution of Loan Agreement in relation to the Acquisition

To procure the funds for the Acquisition, the Company entered into a loan agreement (Facilities Agreement) as described below on February 8, 2021.

(1) Borrowing limit	735.4 billion yen
(2) Execution date of agreement	February 8, 2021
(3) Period of loan execution	From the execution date of the Facilities Agreement until February 3, 2022
(4) Repayment date	February 7 , 2022
(5) Participating financial institutions	MUFG Bank, Ltd. and Mizuho Bank, Ltd.

6) Filing of Shelf Registration Statement for the Issuance of New Shares

To enable the Company to flexibly issue new shares to procure a portion of the funds for the Acquisition, the Company has filed the Shelf Registration Statement in Japan for the issuance of new shares as follows on February 8, 2021.

(1) Class of Securities to be offered	Shares of common stock of the Company
(2) Scheduled Issue Period	For one year from the scheduled effective date of the Shelf Registration (From February 24, 2021 to February 23, 2022)
(3) Scheduled Issue Amount	Up to 270 billion yen
(4) Offering Method	To be determined
(5) Use of Proceeds	To procure the funds for the Acquisition, or for repayment of the borrowing conducted to procure the fund for the Acquisition
(6) Underwriters	To be determined

Fire outbreak in a wholly-owned manufacturing subsidiary

On March 19, 2021, a fire outbreak at a manufacturing line in the N3 Building (300mm line) of Naka Factory (located in Hitachinaka, Ibaraki Prefecture) of Renesas Semiconductor Manufacturing Co., Ltd, a wholly-owned manufacturing subsidiary of the Company. The fire occurred from the plating equipment due to overcurrent. The cause of the overcurrent and the reason for the ignition is currently being investigated.

Due to this fire, certain property, plant and equipment such as machinery and equipment and inventories such as work in progress were damaged. At this moment, it is difficult to make reasonable estimates for the financial effects of the fire, including the loss on property, plant and equipment and inventories, restoration costs and effect on sales from the halted production, as well as insurance recovery for such damages.

(2) Other

Quarterly information, etc. for the year ended December 31, 2020

(Cumulative period)		First quarter	Second quarter	Third quarter	The year ended December 31, 2020
Revenue	(Million yen)	178,743	345,415	524,093	715,673
Profit before tax (Million yen)	(Million yen)	14,178	29,769	46,592	65,216
Profit attributable to owners of parent	(Million yen)	11,289	23,212	38,471	45,626
Basic earnings per share	(Yen)	6.60	13.55	22.42	26.54

(Accounting period)		First quarter	Second quarter	Third quarter	Fourth quarter
Basic earnings per share	(Yen)	6.60	6.95	8.86	4.14

Independent Auditor's Report

To the Board of Directors of Renesas Electronics Corporation

We have audited the accompanying consolidated financial statements of Renesas Electronics Corporation ("the Company") and its consolidated subsidiaries, which comprise the consolidated statement of financial position as at December 31, 2019 and the consolidated statement of profit or loss, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the purpose of the financial statement audit is not to express an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company and its consolidated subsidiaries as at December 31, 2019, and their financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards.

Emphasis of Matter

We draw attention to Note 6 of "Business Segments" to the consolidated financial statements, which describes that, from the fiscal year ended December 31, 2019, the Company has implemented a change in the classification of segments. Our opinion is not qualified in respect of this matter.

Other Matter

The consolidated financial statements of the Company for the fiscal year ended December 31, 2018 had been audited by a predecessor auditor. The predecessor auditor had issued unqualified opinion for the consolidated financial statements on March 28, 2019.

/s/ PricewaterhouseCoopers Aarata LLC

Tokyo, Japan
March 27, 2020

1. Consolidated Financial Statements

(1) Consolidated Financial Statements

(i) Consolidated Statement of Financial Position

(In millions of yen)

	Notes	As of December 31, 2018	As of December 31, 2019
Assets			
Current assets			
Cash and cash equivalents	8	188,820	146,468
Trade and other receivables	9, 34	79,449	84,459
Inventories	10	115,440	89,642
Other current financial assets	17, 34	494	468
Income tax receivables		2,352	4,438
Other current assets	11	7,069	7,344
Total current assets		393,624	332,819
Non-current assets			
Property, plant and equipment	12, 14, 15	252,503	232,579
Goodwill	7, 13, 15	187,230	625,030
Intangible assets	13, 15	166,524	414,582
Other non-current financial assets	17, 34	5,973	9,995
Deferred tax assets	18	44,149	46,404
Other non-current assets	11	5,232	5,950
Total non-current assets		661,611	1,334,540
Total assets		1,055,235	1,667,359

(In millions of yen)

	Notes	As of December 31, 2018	As of December 31, 2019
Liabilities and equity			
Liabilities			
Current liabilities			
Trade and other payables	19, 34	116,233	100,187
Bonds and Borrowings	20, 34	45,000	93,182
Other current financial liabilities	21, 34	15,057	4,362
Income tax payables		2,983	7,861
Provisions	22	7,112	7,521
Other current liabilities	11	55,384	55,528
Total current liabilities		241,769	268,641
Non-current liabilities			
Trade and other payables	19, 34	4,403	845
Bonds and Borrowings	20, 34	147,248	678,577
Other non-current financial liabilities	21, 34	2,323	10,093
Income tax payables		1,105	4,499
Retirement benefit liabilities	23	32,752	29,572
Provisions	22	3,745	3,860
Deferred tax liabilities	18	18,754	43,257
Other non-current liabilities	11	2,168	4,400
Total non-current liabilities		212,498	775,103
Total liabilities		454,267	1,043,744
Equity			
Issued capital	24	10,699	22,213
Share premium	24	190,074	201,588
Retained earnings	24	410,652	403,068
Treasury shares	24	(11)	(11)
Other components of equity		(13,314)	(6,192)
Total equity attributable to owners of the parent		598,100	620,666
Non-controlling interests		2,868	2,949
Total equity		600,968	623,615
Total liabilities and equity		1,055,235	1,667,359

(ii) Consolidated Statement of Profit or Loss and Consolidated Statement of Comprehensive Income

Consolidated Statement of Profit or Loss

(In millions of yen)

	Notes	The year ended December 31, 2018	The year ended December 31, 2019
Continuing operations			
Sales revenue	6, 25	756,503	718,243
Cost of sales		(424,066)	(415,315)
Gross profit		332,437	302,928
Selling, general and administrative expenses	26	(251,021)	(281,008)
Other income	27	8,953	2,302
Other expenses	28	(22,173)	(17,377)
Operating profit		68,196	6,845
Finance income	29	1,609	2,186
Finance costs	29	(2,131)	(8,774)
Share of profit of investments accounted for using the equity method		49	—
Profit before tax from continuing operations		67,723	257
Income tax expense	18	(16,664)	(6,082)
Profit or loss from continuing operations		51,059	(5,825)
Discontinued operations			
Profit after tax for the year from discontinued operations		—	—
Profit or loss		51,059	(5,825)
Profit attributable to			
Owners of the parent		50,989	(5,914)
Non-controlling interests		70	89
Profit or loss		51,059	(5,825)
Earnings or loss per share	31		
Basic earnings or loss per share (yen)			
Continuing operations		30.57	(3.49)
Discontinued operations		—	—
Total basic earnings or loss per share		30.57	(3.49)
Diluted earnings or loss per share (yen)			
Continuing operations		30.50	(3.49)
Discontinued operations		—	—
Total diluted earnings or loss per share		30.50	(3.49)

Consolidated Statement of Comprehensive Income

(In millions of yen)

	Notes	The year ended December 31, 2018	The year ended December 31, 2019
Profit or loss		51,059	(5,825)
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Remeasurements of defined benefit plans		(4,059)	(3,203)
Equity instruments measured at fair value through other comprehensive income		(54)	(177)
Share of other comprehensive income of investments accounted for using the equity method		(26)	—
Total of items that will not be reclassified to profit or loss		(4,139)	(3,380)
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation of foreign operations		(14,401)	(18,033)
Changes in fair value of cash flow hedges		(14,318)	5,614
Total of items that may be reclassified subsequently to profit or loss		(28,719)	(12,419)
Total other comprehensive income	30	(32,858)	(15,799)
Total comprehensive income		18,201	(21,624)
Comprehensive income attributable to Owners of the parent		18,248	(21,705)
Non-controlling interests		(47)	81
Total comprehensive income		18,201	(21,624)

(iii) Consolidated Statement of Changes in Equity

The year ended December 31, 2018

(In millions of yen)

		Equity attributable to owners of the parent				Other components of equity								
	Notes	Issued capital	Share premium	Retained earnings	Treasury shares	Stock acquisition rights	Remeasurements of defined benefit plans	Equity instruments measured at fair value through other comprehensive income	Exchange differences on transition of foreign operations	Changes in fair value of cash flow hedges	Total	Total equity attributable to owners of the parents	Non-controlling interests	Total equity
Balance as of January 1, 2018 . .		10,022	189,397	363,542	(11)	2,311	—	(734)	11,206	—	12,783	575,733	2,916	578,649
Profit		—	—	50.989	—	—	—	—	—	—	—	50,989	70	51,059
Other comprehensive income		—	—	—	—	—	(4,048)	(80)	(14,295)	(14,318)	(32,741)	(32,741)	(117)	(32,858)
Total comprehensive income		—	—	50.989	—	—	(4,048)	(80)	(14,295)	(14,318)	(32,741)	18,248	(47)	18,201
Issue of new shares	24	677	677	—	—	—	—	—	—	—	—	1,354	—	1,354
Share-based payments	33	—	—	—	—	2,854	—	—	—	—	2,854	2,854	—	2,854
Change of equity method range		—	—	—	—	—	—	(89)	—	—	(89)	(89)	—	(89)
Transfer to retained earnings		—	—	(3,879)	—	—	4,048	(169)	—	—	3,879	—	—	—
Other		—	—	—	—	—	—	—	—	—	—	—	(1)	(1)
Total amount of transactions with owners . . .		677	677	(3,879)	—	2,854	4,048	(258)	—	—	6,644	4,119	(1)	4,118
Balance as of December 31, 2018		10,699	190,074	410,652	(11)	5,165	—	(1,072)	(3,089)	(14,318)	(13,314)	598,100	2,868	600,968

The year ended December 31, 2019

(In millions of yen)

		Equity attributable to owners of the parent												
						Other components of equity								
	Notes	Issued capital	Share premium	Retained earnings	Treasury shares	Stock acquisition rights	Remeasurements of defined benefit plans	Equity instruments measured at fair value through other comprehensive income	Exchange differences on transition of foreign operations	Changes in fair value of cash flow hedges	Total	Total equity attributable to owners of the parents	Non-controlling interests	Total equity
Balance as of January 1, 2019 . .		10,699	190,074	410,652	(11)	5,165	—	(1,072)	(3,089)	(14,318)	(13,314)	598,100	2,868	600,968
Profit or loss . . .		—	—	(5,914)	—	—	—	—	—	—	—	(5,914)	89	(5,825)
Other comprehensive income		—	—	—	—	—	(3,203)	(177)	(18,025)	5,614	(15,791)	(15,791)	(8)	(15,799)
Total comprehensive income		—	—	(5,914)	—	—	(3,203)	(177)	(18,025)	5,614	(15,791)	(21,705)	81	(21,624)
Issue of new shares	24	11,514	12,097	—	—	—	—	—	—	—	—	23,611	—	23,611
Share-based payments	33	—	—	—	—	11,956	—	—	—	—	11,956	11,956	—	11,956
Transfer to retained earnings		—	(583)	(1,670)	—	(1,068)	3,203	118	—	—	2,253	—	—	—
Reclassification to non-financial assets		—	—	—	—	—	—	—	—	8,704	8,704	8,704	—	8,704
Total amount of transactions with owners . . .		11,514	11,514	(1,670)	—	10,888	3,203	118	—	8,704	22,913	44,271	—	44,271
Balance as of December 31, 2019		22,213	201,588	403,068	(11)	16,053	—	(1,131)	(21,114)	—	(6,192)	620,666	2,949	623,615

(iv) Consolidated Statement of Cash Flows

(In millions of yen)

	Notes	The year ended December 31, 2018	The year ended December 31, 2019
Cash flows from operating activities			
Profit before tax		67,723	257
Depreciation and amortization		112,743	148,026
Impairment loss		1,526	2,256
Finance income and costs		649	5,927
Share of profit of investments accounted for using the equity method		(49)	—
Share-based payments		4,208	11,896
Gain (loss) on sales of non-current assets		(1,025)	(515)
Changes in inventories		6,956	43,967
Changes in trade and other receivables		22,336	9,882
Changes in trade and other payables		(27,999)	(36)
Changes in retirement benefit liabilities		(1,265)	(3,044)
Changes in provisions		(2,055)	411
Changes in other current liabilities		(3,403)	(11,609)
Other		5,433	(962)
Subtotal		185,778	206,456
Interest received		1,485	1,361
Dividends received		48	203
Income taxes paid		(15,003)	(6,060)
Net cash flows from operating activities		172,308	201,960
Cash flows from investing activities			
Purchase of property, plant and equipment		(64,513)	(38,284)
Proceeds from sales of property, plant and equipment		2,248	755
Purchase of intangible assets		(22,361)	(18,084)
Purchase of other financial assets		(766)	(545)
Proceeds from sales of other financial assets		3,175	1,431
Acquisition of subsidiaries	7	—	(685,831)
Proceeds from sales of investments accounted for using the equity method		1,378	—
Other		(33)	(1,604)
Net cash flows from investing activities		(80,872)	(742,162)
Cash flows from financing activities			
Net change in short-term borrowings	32	10,000	(45,000)
Proceeds from long-term borrowings	32	—	847,000
Repayments of long-term borrowings	32	(46,529)	(217,645)
Repayment of lease liabilities	32	(916)	(5,726)
Interest paid		(1,806)	(12,796)
Payments for retirement by purchase of bonds	32	—	(65,409)
Other		—	42
Net cash flows from financing activities		(39,251)	500,466
Effect of exchange rate changes on cash and cash equivalents		(2,910)	(2,616)
Increase (decrease) in cash and cash equivalents		49,275	(42,352)
Cash and cash equivalents at beginning of year	8	139,545	188,820
Cash and cash equivalents at end of year	8	188,820	146,468

Notes to Consolidated Financial Statements

1. Reporting Entity

Renesas Electronics Corporation (hereafter "the Company") is a public company established under the Companies Act of Japan and domiciled in Japan. The accompanying consolidated financial statements of the Company and its consolidated subsidiaries (hereafter "the Group") are composed of the Company, its subsidiaries and interests of the Group in its associates, with December 31, 2019 as the closing date. The Group engages in research, design, development, manufacturing, sales and services related to various kinds of semiconductors as a manufacturer specializing in semiconductors. For details of the Group's major business, please refer to "Note 6. Business Segments".

The consolidated financial statements for the year ended December 31, 2019 were approved on March 27, 2020 by Hidetoshi Shibata, President and CEO, and Shuhei Shinkai, Executive Vice President, Member of the Board and CFO.

2. Basis for Preparation

(1) Compliance with IFRS

Because the Group meets the requirements for "Specified Companies Complying with Designated International Accounting Standards" stated in Article 1-2 of Ordinance on Consolidated Financial Statements, the Group has adopted the provisions of Article 93 of the Ordinance. The consolidated financial statements of the Group have been prepared in accordance with IFRS, as issued by the International Accounting Standards Board.

(2) Basis of measurement

The consolidated financial statements of the Group have been prepared based on the accounting policies separately described in "Note 3. Significant Accounting Policies." Assets and liabilities are measured at a historical cost basis unless otherwise stated.

(3) Functional currency and presentation currency

The consolidated financial statements are presented in Japanese yen (rounded to the nearest million yen), which is the functional currency of the Company.

(4) Change in presentation

(Consolidated Statement of Cash Flows)

"Interest paid", which was disclosed under "Cash flows from operating activities" for the prior fiscal year, has been reclassified to "Cash flows from financing activities" from the current fiscal year due to the increase in its materiality. In order to reflect this change in presentation, the consolidated Statement of Cash Flows for the prior fiscal year has also been reclassified. Consequently, 1,806 million yen of "Interest paid", which was disclosed under "Cash flows from operating activities", has been reclassified to "Cash flows from financing activities".

(5) Change in accounting policies

(a) The Group has applied International Financial Reporting Standards 16 "Leases" (hereafter "IFRS16") for the fiscal year ended December 31, 2019.

The Group has applied IFRS16 retrospectively with the cumulative effect of initially applying the Standard recognized at the date of initial application and did not restate comparative information in accordance with paragraph C5(b) for IFRS16. In addition, the Group has applied the practical expedient permitted in paragraph C3 for IFRS16 and did not apply this Standard to contracts that were not previously identified as leases or containing a lease.

Right-of-use asset has been measured at an amount equal to the lease liability, adjusted only by the amount of accrued lease payments relating to that lease recognized in the statement of financial position as of December 31, 2018 in conformity with paragraph C8(b)(ii) for IFRS16. In the context of transition to IFRS16, 12,682 million yen of right-of-use assets and 13,102 million yen of lease liabilities have been recognized, and the difference of 420 million yen has been recognized as accrued leases payments. The weighted average lessee's incremental borrowing rate applied to lease liabilities recognized in the statement of financial position at the date of initial application of IFRS16 is 1.6%.

The adjustment between the amounts of contracts identified as operating leases in accordance with International Accounting Standard 17 (hereafter "IAS17") "Leases" as of December 31, 2018, discounted by the lessee's incremental borrowing rate and the amounts of lease liabilities recognized in the statement of financial position at the date of initial application is as follow.

(In millions of yen)

Amounts of contracts identified as operating lease commitments in accordance with IAS17 as of December 31, 2018 at the date of initial application	12,792
Amounts discounted by the lessee's incremental borrowing rate of 1.6%	(754)
Cancellable operating lease contracts	1,064
Finance lease liabilities as of December 31, 2018	2,762
Lease liabilities recognized in the statement of financial position at the date of initial application (January 1, 2019)	15,864

When applying IFRS16, the Group has applied the practical expedient in paragraph C10 for IFRS16 as below for the contracts previously identified as operating leases in accordance with IAS17.

- The Group assesses the leases applying International Accounting Standard 37 "Provisions, Contingent Liabilities and Contingent Assets" (hereafter "IAS37") immediately before the date of initial application as an alternative to performing an impairment review
- Leases for which the lease term ends within 12 months of the date of initial application are treated as short-term leases.
- Initial direct costs from the measurement of the right-of-use asset at the date of initial application are excluded.
- The Group determines the lease term of the contract which contains options to extend or terminate the lease using hindsight.

(b) Application of IFRIC23 "Uncertainty over Income Tax Treatments"

The Group has applied International Financial Reporting Interpretations Committee Interpretation 23 "Uncertainty over Income Tax Treatments" for the fiscal year ended December 31, 2019. In addition, the impact of this application on the financial statements is insignificant.

3. Significant Accounting Policies

The significant accounting policies of the Group are as follows and are applied to all the periods presented in the consolidated financial statements.

(1) Basis of consolidation

a. Subsidiaries

Subsidiaries are entities controlled by the Group. Control refers to a case in which the Group has power over an entity, is exposed to variable returns from involvement with the entity and has the ability to affect those returns through its power over the entity.

The financial statements of subsidiaries are included in the consolidated financial statements from the date when control is obtained until the date when control is lost. In the event that the Group disposes of some of its ownership interest in a subsidiary that does not result in a loss of control, the change in ownership interest of the Group are accounted for as an equity transaction, and the difference between the adjustment of non-controlling interests and the fair value of the consideration is directly recognized in equity as equity attributable to owners of the parent.

If the closing dates of a subsidiary and that of the consolidated financial statements are different, financial statements prepared with a provisional closing date, which is same as that of consolidated financial statements, are used.

b. Associates

Associates are entities over which the Group has a significant influence over the decisions on financial and operating policies, but does not have control. Investments in associates are accounted for using the equity method.

Investments in associates are initially recognized at cost. Ownership interests of the Group in profit or loss and other comprehensive income of the associate from the date when the Group obtains significant influence until the date when the Group loses significant influence are recognized as changes in the amount of investments in associates.

Since the closing date of an associate and that of the consolidated financial statements are different, financial statements prepared with a provisional closing date, which is same as that of consolidated financial statements, are used.

c. Transactions eliminated on consolidation

Inter-company balances of receivables and payables, transactions and unrealized gains or losses resulting from inter-company transactions are eliminated on consolidation.

(2) Business combinations

Business combinations are accounted for using the acquisition method. Consideration transferred in a business combination is measured as the sum of the acquisition-date fair value of the assets transferred, liabilities assumed and equity instruments issued by the Company in exchange for control over the acquiree.

Any excess of the consideration for acquisition, the non-controlling interests in the acquiree and the fair value of assets of the acquiree that the acquirer previously held over the net amount of identifiable assets and liabilities as of the date of acquisition is recognized as goodwill. Conversely, if the consideration for acquisition is lower than the net amount, it is immediately recognized in profit or loss. Acquisition-related costs are recognized in profit or loss. The additional acquisition of non-controlling interests after obtaining control is accounted for as an equity transaction, and no corresponding goodwill is recognized.

If the initial accounting treatment of a business combination is not completed by the end of the fiscal year when the business combination took place, provisional amounts for the items for which accounting is incomplete are reported, and such provisional amounts that were recognized as of the date of acquisition are adjusted retrospectively during the measurement period within one year from the date of acquisition.

(3) Foreign currency translation

a. Functional currency and presentation currency

The financial statements of Group entities are prepared in their respective functional currency. The consolidated financial statements of the Group are presented in Japanese yen, which is the functional currency of the Company.

b. Foreign currency transactions

Foreign currency transactions are translated into the functional currency at the spot exchange rate or a rate approximate to the spot exchange rate on the date of the transaction. Monetary items denominated in a foreign currency at the end of the reporting period are translated into the functional currency using the closing rate, while non-monetary items denominated in a foreign currency that are measured at historical cost are translated using the exchange rate in effect on the date of the initial transaction, and those that are measured at fair value are translated using the exchange rate in effect on the date when the fair value was calculated.

Exchange differences from translation or settlement are recognized in profit or loss during the period when they arise. However, exchange differences arising from equity instruments and cash flow hedges measured through other comprehensive income are recognized in other comprehensive income.

c. Foreign operations

In preparing the consolidated financial statements, the assets and liabilities of a foreign operation are translated into Japanese yen at the exchange rate as of the closing date of the consolidated financial statements, and profit or loss and cash flows of the foreign operation are translated into Japanese yen at the exchange rate on the date of the transaction or the average exchange rate for the period that is approximate to the exchange rate. Exchange differences are recognized in other comprehensive income, and the cumulative amount thereof is recognized in other components of equity.

On disposal of the entire ownership interest in a foreign operation or part of the interest that results in a loss of control or significant influence, the exchange differences of the foreign operation that were recognized in other comprehensive income and accumulated in equity are reclassified from equity to profit or loss when the related gains or losses on disposal are recognized.

(4) Financial instruments

a. Financial assets other than derivatives

(a) Initial recognition and measurement

Trade and other receivables are initially recognized at their transaction price on that date, and all other financial assets are initially recognized on the date of the transaction when the Company becomes the contracting party to the financial assets.

At the time of initial recognition, financial assets are classified as financial assets measured at amortized cost or financial assets measured at fair value.

(i) Financial assets measured at amortized cost

A financial asset is classified as a financial asset measured at amortized cost if both of the following conditions are met or a financial asset measured at fair value in other cases.

- Assets are held within a business model that aims to hold assets to collect contractual cash flows.
- The contract terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

(ii) Financial assets measured at fair value through other comprehensive income

- Debt instruments measured at fair value through other comprehensive income

  If both of the following conditions are met, financial assets are classified as debt instruments measured at fair value through other comprehensive income.

  - Assets are held within a business model whose objective is achieved by both the collection and sale of contractual cash flows.
  - The contract terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

- Equity instruments measured at fair value through other comprehensive income

  Of financial assets measured at amortized cost, or financial assets other than debt instruments measured at fair value through other comprehensive income, when an irrevocable election at the time of initial recognition is made, subsequent changes in fair value are recognized in other comprehensive income and such equity instruments are classified as financial assets measured at fair value through other comprehensive income.

(iii) Financial assets measured at fair value through profit or loss

Financial assets measured at amortized cost or financial assets other than those measured at fair value through other comprehensive income are classified into financial assets measured at fair value through profit or loss.

Financial assets are recognized initially at fair value plus, in the case of financial assets not recorded at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs for financial assets measured at fair value through profit or loss are recognized in profit or loss.

(b) Subsequent measurement

After the initial recognition, financial assets are measured as follows according to their classification.

(i) Financial assets measured at amortized cost

Financial assets measured at amortized cost are measured at amortized cost using the effective interest method.

(ii) Financial assets measured at fair value through other comprehensive income

- Debt instruments measured at fair value through other comprehensive income

  The amount of changes in the fair value of debt instruments measured at fair value through other comprehensive income is recognized in other comprehensive income, except for impairment gains or losses and foreign exchange gains or losses, until the financial assets are derecognized. If the financial assets are derecognized, gains or losses accumulated in other comprehensive income are reclassified to profit or loss.

- Equity instruments measured at fair value through other comprehensive income

  The amount of changes in the fair value of equity instruments measured at fair value through other comprehensive income is recognized in other comprehensive income. If the financial assets are derecognized, or if the fair value has declined significantly, gains or losses accumulated in other comprehensive income are directly reclassified to retained earnings. Dividend income from the financial assets is recognized as finance income in profit or loss.

(iii) Financial assets measured at fair value through profit or loss

Financial assets measured at fair value through profit or loss are measured at fair value after the initial recognition, and changes in fair value are recognized in profit or loss.

(c) Impairment of financial assets

For impairment of financial assets measured at amortized cost, etc., the Group has decided to recognize an allowance for expected credit losses of financial assets. On each reporting date, the Group assesses whether the credit losses of financial instruments have increased significantly subsequent to initial recognition.

If the credit losses of financial instruments have not increased significantly after initial recognition, the loss allowance of financial instruments is measured at the amount of 12-month expected credit losses, and if the credit losses of financial instruments have increased significantly after initial recognition, the loss allowance of the financial instruments is measured at the amount of lifetime expected credit losses.

However, for trade receivables, etc., the loss allowance is always measured at the amount of lifetime expected credit losses.

Expected credit losses of financial instruments are estimated in a way that reflects:

- An unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes
- The time value of money
- Reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions

Changes in the amount of the measurement are recognized in profit or loss.

(d) Derecognition

The Group derecognizes financial assets if the contractual rights to the cash flows from the financial asset expire, or if substantially all risks and rewards associated with ownership of the financial assets are transferred as a result of assigning the contractual right to receive cash flows from the financial assets.

b. Financial liabilities other than derivatives

(a) Initial recognition and measurement

At the time of initial recognition, financial liabilities are classified as financial liabilities measured at amortized cost or financial liabilities measured at fair value through profit or loss. Although all financial liabilities are initially measured at fair value, financial liabilities measured at amortized cost are measured at an amount obtained by deducting directly attributable transaction costs.

(b) Subsequent measurement

(i) Financial liabilities measured at amortized cost

Financial liabilities measured at amortized cost are measured at amortized cost using the effective interest method.

(ii) Financial liabilities measured at fair value through profit or loss

Financial liabilities measured at fair value through profit or loss are measured at fair value after the initial recognition, and the changes are recognized in profit or loss.

(c) Derecognition

The Group derecognizes financial liabilities when they are extinguished, for example when then obligations specified in the contract are discharged, cancelled or expired.

c. Derivatives and hedge accounting

The Group holds derivative financial instruments for the purpose of hedging the risk of exchange rate fluctuations, etc. The Group has a policy of not conducting speculative derivative transactions.

Derivatives are initially recognized at fair value, and related transaction costs are recognized in profit or loss when they are incurred. After the initial recognition, derivatives are remeasured at fair value, and changes in the fair value are accounted for as described below, depending on whether the derivative financial instruments that are designated as hedging instruments meet the requirements for hedge accounting. The Group designates the derivatives that meet the requirements for hedge accounting as hedging instruments and applies hedge accounting. In addition, at the inception of a hedge, the Group formally documents the risk management objective, the relationship between hedging instruments and the hedged items, along with strategies when executing hedging transactions, and the method of assessing hedge effectiveness.

(i) Cash flow hedges

Of gains or losses from hedging instruments, the effective portion of the hedge is recognized in other comprehensive income, and the ineffective portion is recognized in profit or loss.

The amount of hedging instruments that is recorded in other comprehensive income is reclassified to profit or loss at the time when the underlying hedged transactions affect profit or loss. If the hedged items give rise to the recognition of non-financial assets or non-financial liabilities, the amount that is recognized in other comprehensive income is reclassified as an adjustment to the initial carrying amount of non-financial assets or non-financial liabilities.

For cash flow hedges other than the above, the amount is reclassified from other comprehensive income to profit or loss in the same period or periods during which the hedged expected future cash flows affect profit or loss. However, if the accumulated amount is a loss and if all or part of the loss is not expected to be recovered in the future, the amount that is not expected to be recovered is immediately reclassified to profit or loss.

When hedge accounting is terminated, this accumulated amount remains in other comprehensive income until the expected future cash flows occur, and if the forecast transaction is no longer expected to occur, this amount is immediately reclassified to profit or loss.

(ii) Derivatives that do not meet requirements for hedge accounting

Changes in fair value are recognized in profit or loss.

(5) Cash and cash equivalents

Cash and cash equivalents consist of cash on hand, deposits that can be withdrawn at any time and short-term investments with a maturity of 3 months or less when purchased that can be easily converted to cash and are subject to an insignificant risk of changes in value.

(6) Inventories

The acquisition cost of inventories comprises all costs of purchase, costs of conversion and all other costs incurred in bringing the inventories to their present location and condition.

After the initial recognition, inventories are measured at the lower of cost and net realizable value, but if cost exceeds net realizable value, the inventories are written down to net realizable value. The net realizable value is calculated by deducting the estimated costs of completion and the estimated costs necessary to make the sale from the estimated selling price in the ordinary course of business.

The cost is also calculated using the following methods:

Merchandise and finished goods
- Custom-made products: Specific identification method
- Mass products: Average method

Work in progress
- Custom-made products: Specific identification method
- Mass products: Average method

Raw materials and supplies: Mainly average method

(7) Property, plant and equipment (other than leased assets)

The acquisition cost of property, plant and equipment includes costs directly related to the acquisition of assets, dismantling, disposal and restoration costs and borrowing costs that meet the requirements for capitalization.

The cost model is used in the measurement of property, plant and equipment, and they are presented at the carrying value obtained by deducting accumulated depreciation and accumulated impairment losses from the acquisition cost.

Except for land and construction in progress, the acquisition cost of each asset after deducting the residual value is depreciated over the estimated useful life using the straight-line method.

The estimated useful life, the residual value and the depreciation method are reviewed at the end of each fiscal year, and any changes are applied to the period when the estimated are changed and future periods prospectively as a change in the accounting estimate. The impact of the change of these estimates is recognized in the period when the estimates are changed and future periods.

The estimated useful lives of major assets are as follows.

Buildings and structures	10 to 45 years
Machinery, equipment and vehicles	2 to 8 years
Tools, furniture and fixtures	2 to 10 years

(8) Goodwill and intangible assets

a. Goodwill

The measurement of goodwill at the time of initial recognition is as stated in "(2) Business combinations." After initial recognition, goodwill is not amortized and is measured at cost less any accumulated impairment losses.

Goodwill is allocated to each of the acquirer's cash-generating units or groups of cash-generating units that are expected to benefit from the synergies of the business combination, and an impairment test is performed for the cash-generating units to which goodwill was allocated at a certain time each fiscal year and whenever there is an indication of impairment. Impairment loss on goodwill is recognized in profit or loss, and is not reversed in a subsequent period.

b. Intangible assets

The cost model is used for intangible assets, and they are presented at cost less any accumulated amortization and accumulated impairment losses.

(a) Intangible assets acquired separately

Intangible assets acquired separately are measured at cost at the time of initial recognition.

(b) Intangible assets acquired in a business combination

For intangible assets acquired in a business combination, their acquisition cost is measured at fair value as of the date of acquisition, and developed technology, customer relationships, and research and development under work-in-process are mainly included.

(Developed technology)

Intangible assets reflected on future excess earnings power expected to arise from the technology etc. have been already developed as of the date of acquisition with the acquiree are recognized as Developed technology.

(Customer relationships)

Intangible assets reflected on future excess earnings power expected to arise from the existing customers as of the date of acquisition with the acquiree are recognized as Customer relationships.

(Research and development under work-in-process)

Intangible assets in intermediate stage of identifiable research and development assets meeting the asset requirements are recognized as Research and development under work-in-process.

The details for intangible assets acquired in a business combination, see “Note 13 Goodwill and Intangible Assets”.

(c) Internally generated intangible assets (Capitalized development cost)

For internally generated intangible assets, the expenditure is recorded as an expense, except for development costs that meet the following requirements for capitalization:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale
- The intention of an entity to complete the intangible asset and use or sell it
- An ability to use or sell the intangible asset
- A method for the intangible asset to generate probable future economic benefits
- The availability of adequate technical, financial and other resources necessary for completing the development of the intangible asset and using or selling it
- An ability to measure the expenditure attributable to the intangible asset during its development reliably

  These internally generated intangible assets are amortized using the straight-line method from the time when they are provided for use in business operations based on an estimated useful life (5 years) that is expected to provide net cash inflow. Expenditure on research and development that does not meet the requirements for capitalization above is recognized in profit or loss at the time of occurrence.

Intangible assets with finite useful lives are amortized over their respective estimated useful life using the straight-line method, and an impairment test is performed if any indications of impairment exist. For intangible assets with finite useful lives, their useful lives and amortization method are reviewed at the end of each fiscal year, and if there is a change, it is applied to the period when the estimated are changed and future periods prospectively as a change in the accounting estimate.

Commercial software products are mainly amortized using a method based on the expected sales volume over the expected sales period (3 years or less), and software for internal use is mainly amortized using the straight-line method based on the expected available period (5 years) for internal use. Technical assets are amortized using the straight-line method based on the available period (12 years or less) in business activities.

Intangible assets with indefinite useful lives and intangible assets that are not yet available for use are not amortized, and an impairment test is performed at a certain time each fiscal year or whenever any indication of impairment exists.

(9) Leases

The Group has applied IFRS16 retrospectively with the cumulative effect of initially applying the Standard recognized at the date of initial application and did not restate comparative information. In addition, the Group has applied the practical expedient under which it is not required to perform a review for the contracts that were not previously identified as leases or containing a lease. Thus, the Group has adopted this standard for contracts that were previously identified as leases adopting IAS 17 and IFRIC 4 "Determining Whether an Arrangement Contains a Lease" (hereafter "IFRIC 4") for the contracts signed before the date of initial application of IFRS16.

a Overall

(a) Identification of a lease

At inception of a contract, the Group assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Group reviews the following to assesses whether a contract conveys the right to control the use of an identified asset.

(i)The use of the identified asset in a contract is directed.

(ii)The lessee has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use.

(iii)The lessee has the right to direct the use of an asset. Also, in case that how and for what purpose the asset is used are predetermined, if applicable to any of the following, it's determined that the lessee has the right to direct the use of an asset.

- The lessee has the right to operate the asset.
- The lessee designed the asset in a way that predetermines how and for what purpose the asset will be used.

(b) Lease term

The lease term is defined as the non-cancellable period for which a lessee has the right to use an underlying asset, together with both:

- periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option; and
- periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option.

b Leases as Lessee

(a) Separable components of a contract

The Group allocates the consideration in contract for a building lease to lease and non-lease components on the basis of the relative stand-alone price of each lease component. In addition, the Group elects not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single lease component for the lease other than a building lease.

(b) Right-of-use assets

The Group recognizes the right-of-use asset and the lease liability at the date of initial application. The right-of-use asset is measured initially at cost. This cost is calculated by deducting any lease incentives received from the sum of the amounts of the initial measurement of the lease liability, any lease payments made at or before the commencement date, any initial direct costs and an estimate of costs to be incurred in dismantling and removing the underlying assets, restoring the underlying asset or restoring the site on which it is located. After the commencement date, the right-of-asset is measured using a cost model by deducting any accumulated depreciation and any accumulated impairment losses from the cost.

The right-of-use asset is depreciated using the straight-line method over the period which is the earlier of the useful life of the underlying asset or the lease term. If it is reasonably certain that the Group will exercise a purchase option, depreciation is based on the useful life of the underlying asset.

(c) Lease liability

Lease liability is measured initially at the present value of unpaid lease payments discounted using the interest rate implicit in the lease. If the interest rate implicit in the lease cannot be readily determined, the Group's incremental borrowing rate is used and the Group typically uses our incremental borrowing rate as discount rate.

The lease payments in the measurement of lease liabilities includes the fixed payments, the amount of payments for the lease in any optional period if it is considered to be reasonable certain to exercise an extension option, and the payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease.

If there is a change in future lease payments resulting from a change in an index or rate, there is a change in the amounts expected to be payable under a residual value guarantee, or there is a change in determining whether purchase, extension and termination option is reasonably certain to exercise, lease liability is remeasured.

When lease liability is remeasured, the carrying amount of the right-of-use asset is adjusted or the remaining remeasurement is recognized in profit or loss if the carrying amount of the right-of-use assets is reduced to zero.

(d) Short-term leases within 12 months and leases of low-value assets
The Group elects not to recognize right-of-use assets and lease liabilities for short-term leases within 12 months and leases of low-value assets including IT equipment, and recognizes these lease payments as expenses over the lease term using the straight-line method.

c Policy under IAS 17 and IFRIC 4
For the prior periods, the Group, as lessee, classify the lease as a finance lease in cases where almost all the risks and rewards of ownership of the underlying assets are transferred and as an operating lease in cases where they are not transferred.

(a) Identifying a lease
For the contracts signed before January 1, FY2019, the Group has determined whether a contract is, or contains, a lease based on the following review.

(i) Fulfilment of the arrangement depends upon the use of a specific asset or assets.
(ii) The arrangement conveys a right to control the use of the underlying asset. This is the case if any of the following conditions is met:

- The purchaser has the ability or right to operate the asset or direct others to operate the asset in a manner it determines while obtaining or controlling more than an insignificant amount of the output or other utility of the asset.
- The purchaser has the ability or right to control physical access to the underlying asset while obtaining or controlling more than an insignificant amount of the output or other utility of the asset.
- Facts and circumstances indicate that it is remote that one or more parties other than the purchaser will take more than an insignificant amount of the output or other utility that will be produced or generated by the asset during the term of the arrangement, and the price that the purchaser will pay for the output is neither contractually fixed per unit of output nor equal to the current market price per unit of output as of the time of delivery of the output.

(b). Finance leases
Leased assets and lease liabilities are initially recognized at the lower of the fair value at the commencement of the lease and the present value of minimum lease payments.

After the initial recognition, they are depreciated using the straight-line method over the estimated useful life or the lease term, whichever is shorter, based on the accounting policy applied to the asset. The minimum lease payments are allocated to finance costs and the repayment portion of the liability balance, and finance costs are allocated over the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

(c). Operating leases
In operating lease transactions, lease payments are recognized in profit or loss over the lease term using the straight-line method. In addition, variable lease payments are recognized in profit or loss during the period when they are incurred.

(10) Impairment of non-financial assets
The Company determines whether there is any indication that an asset (except for inventories, deferred tax assets and assets pertaining to retirement benefits) may be impaired each fiscal year, and if such indication exists, an impairment test is performed. However, for goodwill or intangible assets with indefinite useful lives or that are not yet available for use, an impairment test is performed at a certain time each fiscal year or when any signs of impairment are identified.

In the impairment test, a recoverable amount is estimated, and the carrying amount and the recoverable amount are compared. The recoverable amount of assets, cash-generating units or groups of cash-generating units is calculated at the higher of the value in use and the fair value less costs of disposal. The value in use is calculated by discounting the estimated future cash flows to the present value, using the pre-tax discount rate that reflects the time value of money and risks specific to the asset.

If the recoverable amount of assets, cash-generating units or groups of cash-generating units is lower than the carrying amount as a result of the impairment test, an impairment loss is recognized. When the impairment loss of a cash-generating unit including goodwill is recognized, an allocation is made first to reduce the carrying amount of goodwill that is allocated to the cash-generating unit, and then an allocation is made to proportionally reduce the carrying amount of other assets in the cash-generating unit.

The impairment loss is reversed if there is any indication that the impairment loss recognized in a prior period may no longer exist or may have decreased and if the estimated recoverable amount exceeds the carrying amount. The upper limit of the reversal shall not exceed the carrying amount that would have been determined had no impairment loss been recognized in prior years, net of depreciation or amortization. The impairment loss on goodwill is not reversed.

(11) Provisions

The Company recognizes a provision if the Group has assumed a legal or constructive obligation as a result of a past event, if it is probable that an outflow of economic benefits will be required to settle the obligation and if a reliable estimate can be made of the amount of the obligation.

If the time value of the money of the provision is significant, the estimated future cash flows are discounted to the present value using a pre-tax discount rate that reflects the time value of the money and risks specific to the liability. The unwinding of the discount amount due to the passage of time are recognized as a finance cost.

(12) Levies

For levies that are an outflow of resources embodying economic benefits required by the government to entities in accordance with laws and regulations, an expected payment is recognized as a liability when the obligation event that triggers the payment of levies prescribed by laws and regulations occurs.

(13) Employee benefits

a. Short-term employee benefits

A short-term employee benefit is an employee benefit that will be settled within 12 months from the end of the fiscal year in which the employee renders the related service, and the Group recognizes an amount expected to be paid in exchange for the services rendered during a certain accounting period. Short-term employee benefits in the Group include bonuses and benefits related to paid leave.

The expected costs of employee benefits related to accumulating paid leave are recognized when an employee renders the service that will increase the entitlement to future paid leave. In addition, the Group measures the expected cost of accumulating paid leave as an additional amount that the Group is expected to pay as a result of the unused entitlement that has accumulated as of the end of the fiscal year.

Bonuses are recognized as a liability if the Group has a legal or constructive obligation to pay as a result of the provision of service by the employee in the past and if the obligation can be estimated reliably.

b. Post-employment benefits

For post-employment benefit plans, the Group has adopted defined benefit plans and defined contribution plans.

(a) Defined contribution plans

Contributions to defined contribution plans are recognized as an expense when they are incurred unless they are included in inventories or property, plant and equipment. If contributions already paid exceed contributions due for services provided before the end of the fiscal year, an entity recognizes the excess as an asset to the extent to which the prepayment becomes the reduction of future payments or a refund.

(b) Defined benefit plans

The net amount of assets or liabilities of the defined benefit plan is the amount obtained by deducting the fair value of the plan assets (including the upper limit of the assets and adjustments to minimum funding requirements, if necessary) from the present value of defined benefit obligations, and it is recognized in the consolidated financial statements as an asset or a liability. The defined benefit obligations are calculated using the projected unit credit method, and the present value of defined benefit obligations is calculated by applying a discount rate to the expected payment amount in the future. The discount rate is calculated based on market yields at the end of the reporting period on high quality corporate bonds corresponding to the discount period by setting the discount period based on the period until the future expected benefit payment date in each reporting period.

Service costs and net interest expense for the net amount of assets or liabilities related to the defined benefit plans are recognized in profit or loss.

Actuarial gains or losses and fluctuations in the return on the plan assets excluding the portion included in the net interest expense and change in the impact of the asset ceiling are recognized in other comprehensive income as “Remeasurements of defined benefit plans” in the corresponding period, and are immediately transferred from other components of equity to retained earnings. Past service costs are recognized in profit or loss when the plan is revised or curtailed, or when related restructuring costs or termination benefits are recognized, whichever is earlier.

c. Other long-term employee benefits

As long-term employee benefit plans other than post-element benefits, the Group has a special leave and a reward plan based on a certain number of service years. The obligations regarding other long-term employee benefits are measured at the amount obtained by discounting the estimated amount of future benefits that the employees have earned as consideration for services rendered in the previous and current fiscal years to the present value.

(14) Treasury shares

When treasury shares are acquired, the amount of the consideration paid, including directly attributable transaction costs, is recognized at cost and deducted from equity. If treasury shares are sold, the consideration received is recognized as an increase in equity, and the difference between the carrying amount and the consideration received is recognized in the share premium account.

(15) Share-based payments

The Group has adopted an equity-settled share-based payment plan as an incentive plan for directors (excluding outside directors), senior vice presidents and employees, etc.

Share-based payments (hereafter "stock options") are estimated at fair value on the grant date and recognized as an expense over the vesting period, taking into account the number of stock options that are expected to eventually vest, and the same amount is recognized as an increase in equity. The fair value of granted options is calculated by taking the terms and conditions of the options into account. If it is determined that the number of stock options that will be vested will differ from the prior estimate due to subsequent information, the estimate of the number of stock options that will be vested is revised as necessary.

(16) Revenue recognition

The Group recognizes revenue based on the following five-step model.

Step 1: Identify the contract with a customer
Step 2: Identify the performance obligations in the contract
Step 3: Determine the transaction price
Step 4: Allocate the transaction price to the performance obligations in the contract
Step 5: Recognize revenue when the entity satisfies a performance obligation

The Group engages in research, design, development, manufacturing, sales and services related to various kinds of semiconductors as a manufacturer specializing in semiconductors. Revenue is recognized when the goods are delivered as the ownership of these goods has been transferred to the customer and the performance obligations are identified at the time of delivery.

Also, revenue is measured at the fair value of the consideration received after deducting discounts, rebates and returns.

(17) Finance income and costs

Finance income consists of dividend income, interest income, foreign exchange gains, gains on sales of financial assets, gains on hedging financial instruments that are recognized in profit or loss, and the transfer of amounts previously recognized in other comprehensive income. Interest income is recognized at the time of occurrence using the effective interest method. Dividend income is usually recognized on the date when the Group's right to receive payment is established.

Finance costs consist of interest expenses for corporate bonds, borrowings and interest expense for lease liabilities, foreign exchange losses, losses on sales of financial assets, losses from hedging financial instruments that are recognized in profit or loss, and the transfer of amounts previously recognized in other comprehensive income. Acquisitions or construction of qualifying assets, or borrowing costs not directly attributable to the production, are recognized at the time of occurrence using the effective interest method. Lease payments are allocated to finance costs and the repayment portion of the liability balance, and finance costs are allocated over the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

(18) Income tax

Current taxes and deferred taxes are presented as income tax expense in the consolidated statement of profit or loss, except for those related to business combinations and items that are recognized in other comprehensive income or that are directly recognized in equity.

Current taxes and deferred taxes related to items that are recognized in other comprehensive income are recognized in other comprehensive income.

a. Current taxes

Current taxes are measured at the amount paid to tax authorities or the amount expected to be refunded from tax authorities. The tax rates and the tax law used for the calculation of the tax amount are those established or substantively established by the closing date.

b. Deferred taxes

Deferred taxes are calculated based on temporary differences between the tax base amount and the carrying amount for accounting purposes of assets and liabilities at the end of the fiscal year. Deferred tax assets are recognized for deductible temporary differences, unused tax credits and unused tax losses are expected to arise to the extent to which it is probable that taxable profits will available against which they can be utilized, and deferred tax liabilities are recognized for taxable temporary differences, in principle.

Neither a deferred tax asset nor a deferred tax liability is recognized for the following temporary differences:

- Temporary difference arising from the initial recognition of goodwill
- Temporary difference arising from the initial recognition of an asset and a liability arising from a transaction (excluding business combination transactions) that does not have an impact on accounting profits and taxable profits
- A case where the timing for eliminating a taxable temporary difference for an investment in a subsidiary or an associate and an interest in the arrangement of joint control can be controlled and where it is probable that the difference will not be eliminated in the foreseeable future
- A case where it is improbable that a deductible temporary difference for an investment in a subsidiary or an associate and an interest in the arrangement of joint control will be eliminated in the foreseeable future, or a case where it is improbable that a taxable profit that will be available for the temporary difference will be earned

Deferred tax assets and liabilities are measured at a tax rate (and tax law) that is expected to be applied in the period when assets are realized or liabilities are settled based on the statutory tax rate (and tax law) that is established or substantively established by the closing date.

Deferred tax assets and deferred tax liabilities are offset if they have the legally enforceable right to offset current tax assets and current tax liabilities, and if any of the following cases applies:

- Income tax is imposed on the same taxable entity by the same tax authority
- Although income tax is imposed on different taxable entities, these taxable entities intend to settle current tax assets and current tax liabilities on a net basis or intend to settle current tax liabilities at the same time as realizing current tax assets.

The carrying amount of deferred tax assets is reviewed at the end of each fiscal year. If it becomes improbable that taxable profits sufficient to realize part or all of the benefits of deferred tax assets will be earned, the carrying amount of deferred tax assets is reduced to that extent. In addition, the amount of the write-down is reversed to the extent to which it becomes probable that sufficient taxable profits will be earned.

(19) Earnings per share

Basic earnings per share are calculated by dividing profit (loss) attributable to owners (ordinary shareholders) of the parent by the weighted average number of ordinary shares outstanding, net of treasury shares, during each fiscal year.

Diluted basic earnings per share are calculated, adjusted for the effects of all dilutive potential ordinary shares.

(20) Non-current assets held for sale and discontinued operations

a. Non-current assets held for sale

Of assets or a group of assets that are not in ongoing use and are expected to be recovered by sale, assets held for sale or liabilities directly related to assets held for sale are distinguished from other assets and liabilities as disposal groups and recorded in the consolidated financial statements if they are available for immediate sale in their present condition, if management is committed to a plan to sell them, and if their sales within a year are highly probable.

Non-current assets classified as assets held for sale are recognized at the lower of the carrying amount and the fair value after deducting the costs for sale, those assets after classification are not depreciated or amortized.

b. Discontinued operations

A component of an entity that has either been disposed of or is classified as held for sale is recognized as a discontinued operation if any of the following applies:

- A separate major line of business or geographical area of operations;
- Part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations; or
- A subsidiary acquired exclusively with a view to resale.

If an operation is classified as a discontinued operation, the consolidated statement of profit or loss and the consolidated statement of comprehensive income for a comparative period are restated on the assumption that the operation was discontinued on the commencement date of the comparative period.

4. Significant Accounting Estimates and Judgments

In preparing the consolidated financial statements, management of the Group is required to make judgments, accounting estimates and assumptions that could have an impact on the application of accounting policies and the reporting amounts of assets, liabilities, revenue and expenses. These estimates and assumptions are based on the best judgment of management, taking into account various factors that are deemed reasonable on the closing date in light of past experience and available information. However, figures based on these estimates and assumptions may differ from the actual results due to their nature.

Estimates and underlying assumptions are reviewed continuously. The impact of the review of these estimates is recognized in the period when the estimates are revised and future periods.

Estimates and assumptions that could have a significant impact on the figures in the consolidated financial statements are as follows.

(1) Impairment of non-financial assets

The Company performs an impairment test for non-financial assets (excluding inventories, deferred tax assets and assets pertaining to retirement benefits) if there is any indication that the recoverable amount will be less than the carrying amount. However, for goodwill or intangible assets with indefinite useful lives or that are not yet available for use, an impairment test is performed at a certain time each fiscal year or when any signs of impairment exist.

The impairment test is performed by comparing the carrying amount and the recoverable amount of the assets, and if the recoverable amount falls below the carrying amount, an impairment loss is recorded. The recoverable amount is mainly calculated using the discounted cash flow model, and when it is calculated, certain assumptions, including the useful life of the asset, future cash flows, discount rate, and long-term growth rate, etc., are made. These assumptions are determined based on the best estimates and judgments of management, but could be influenced by the results of fluctuations in uncertain future economic conditions. If a revision becomes necessary, it could have a significant impact on the amounts that will be recognized in the consolidated financial statements of subsequent periods.

The calculation method of the recoverable amount is stated in "Note 15. Impairment of Non-financial Assets."

(2) Post-employment benefits

The Company has a variety of post-employment benefit plans, including a defined benefit plan.

The present value of the defined benefit obligation of each plan and related service costs, etc. are calculated based on actuarial assumptions. For the actuarial assumptions, estimates and judgments on a range of variables such as the discount rate are required.

The actuarial assumptions are determined based on the best estimates and judgments of the management, but could be affected by the results of fluctuations in uncertain future economic conditions. If a revision becomes necessary, it could have a significant impact on the amounts that will be recognized in the consolidated financial statements of subsequent periods.

These actuarial assumptions and related sensitivities are stated in "Note 23. Employee Benefits."

(3) Provisions

The Group posts a range of provisions in the consolidated statement of financial position, including the provision for product warranties and asset retirement obligations, etc.

These provisions are recorded based on the best estimate of expenditure required for the settlement of the obligations, taking into account risks and uncertainties related to the obligations on the closing date.

The amount of expenditure required for the settlement of the obligations is calculated by comprehensively taking into account results that could arise in the future, but it could be affected by the occurrence of unforeseeable events and changes in the situation. If the actual amount of expenditure differs from the estimate, it could have a significant impact on amounts recognized in the consolidated financial statements of subsequent periods.

The nature and amounts of provisions are stated in “Note 22. Provisions.”

(4) Recoverability of deferred tax assets

When deferred tax assets are recognized, the time and amount of taxable profits that could be earned in the future based on a business plan are estimated and calculated in the judgment of the possibility that taxable profits will arise.

Because the timing and amount of taxable profits are affected by the future business performance of the Group, if the actual timing and amount differ from the estimate, it could have a significant impact on the amounts recognized in the consolidated financial statements of subsequent periods.

Details and amounts of deferred tax assets are stated in “Note 18. Income Tax.”

(5) Inventories

Inventories are measured at cost, but if the net realizable value at the end of the fiscal year falls below the acquisition cost, inventories are measured at the net realizable value, and the difference from the acquisition cost is recognized in the cost of sales, in principle. For slow moving inventory that is outside of the operating cycle process, the net realizable value, etc. is calculated reflecting the future demand and market trends. If the net realizable value declines significantly due to the greater-than-expected deterioration of the market environment, a loss could arise.

(6) Measurement method of the fair value of financial instruments

When the Group evaluates the fair value of certain financial instruments, the Group uses valuation techniques that use inputs that are not observable in the market. These unobservable inputs could be affected by the result of fluctuations in uncertain future economic conditions, and if a revision becomes necessary, it could have a significant impact on the consolidated financial statements in subsequent periods.

The details and amounts of the fair value of financial instruments are stated in “Note 3. Significant Accounting Policies, (4) Financial instruments” and “Note 34. Financial Instruments.”

5. Standards and Interpretations Not Yet Adopted

Of the new standards and interpretations that were newly issued or revised as of the date of the approval of the consolidated financial statements, the major standards and interpretations that the Group has not yet adopted as of December 31, 2019 are as follows.

IFRS 17 “Insurance Contract”

IFRS 17 “Insurance Contract” was issued as replacement for IFRS4 “Insurance Contracts”. The Group will apply the standard from January 1, 2021. At this point, the Group has not yet calculated an impact on the consolidated financial statements by adoption of the standards.

In addition, the International Accounting Standards Board has proposed to defer the effective date of the Standard by one year to 2022 in the Exposure Draft on proposed amendments to IFRS 17 Insurance Contracts published in June 2019.

6. Business Segments

(1) Overview of reportable segments

The Group’s reportable segments are components of the Group for which separate financial information is available that is evaluated regularly by the Board of Directors to determine the allocation of management resources and assess performance.

The Group consists of “Automotive Business” and “Industrial/Infrastructure/IoT Business” and those are the Group’s reportable segments.

The Automotive Business includes the product categories “Automotive control”, comprising semiconductor devices for controlling automobile engines and bodies, and “Automotive information”, comprising semiconductor devices used in automotive information systems such as navigation systems. The Group mainly supplies microcontrollers (MCUs), system-on-chips (SoCs), analog semiconductor devices and power semiconductor devices in each of these categories. The Industrial/Infrastructure/IoT Business includes the product categories “Industrial”, “Infrastructure” and “IoT” which support the smart society. The Group mainly supplies MCUs and SoCs in each of these categories. Additionally, commissioned development and manufacturing from the Group’s design and manufacturing subsidiaries are categorized as “Other”.

From the fiscal year ended December 31, 2019, the Group has implemented a change in the Group's classification of segments for allocation of management resources and assessment of performance. Following this change, the legacy reported sole operating segment of the Group has been divided into "Automotive Business", "Industrial/Infrastructure/IoT Business", with commissioned development and manufacturing from the Group's design and manufacturing subsidiaries categorized as "Other" from the fiscal year ended December 31, 2019. The information on reportable segments for the fiscal year ended December 31, 2018 has also been reclassified in accordance with the new classification of reportable segments.

(2) Information on reportable segments

The accounting treatment for reportable segments is same as described in "Note 3. Significant Accounting Policies.". The internal indicators which are used by management when making decisions have been adjusted by non-recurring items specified by the Group and other adjustment following a certain set of rules from operating profit in accordance with IFRS.

Segment profit or loss is calculated by deducting "Cost of Sale", "General, Selling and Administrative Expenses" and "Other Expenses" from "Revenue" and adding "Other Income". The Group's Executive Officers assess the performance after eliminating intragroup transactions, and therefore, there is no transfer between reportable segments.

Information on reportable segments is as follows.

The year ended December 31, 2018 (In millions of yen)

	Reportable Segments		Other	Adjustment (Note 1)	Total	Adjustment (Note 2)	Consolidation basis
	Automotive	Industrial/ Infrastructure/ IoT					
Revenue from external customers	389,683	346,569	20,251	—	756,503	—	756,503
Segment profit or loss	16,165	80,547	1,834	5,498	104,044	(35,848)	68,196
Financial income							1,609
Financial expenses							(2,131)
Profit of investments accounted for using the equity method							49
Profit or loss before tax for the period							67,723
(Other adjustment) Depreciation and amortization	58,842	36,448	356	—	95,646	17,097	112,743

The year ended December 31, 2019 (In millions of yen)

	Reportable Segments		Other	Adjustment (Note 1)	Total	Adjustment (Note 2)	Consolidation basis
	Automotive	Industrial/ Infrastructure/ IoT					
Revenue from external customers	371,145	329,705	17,393	—	718,243	—	718,243
Segment profit or loss	30,984	59,063	1,619	1,398	93,064	(86,219)	6,845
Financial income							2,186
Financial expenses							(8,774)
Profit or loss before tax for the period							257
(Other adjustment) Depreciation and amortization	59,191	41,373	(160)	—	100,404	47,622	148,026

(Note 1) Reportable Segment's allocation of non-recurring items and other specified adjustments deducted or adjusted following a certain set of rules

(Note 2) Non-recurring items and other specified adjustments deducted or adjusted following a certain set of rules

(3) Information on products and services

Information on products and services is the same with information on reportable segments and therefore, omitted from this section.

(4) Information on regions and countries

The components of revenue from external customers by region and country are as follows.

a. Sales revenue from external customers

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Japan	300,530	261,663
China	153,289	150,486
Asia (Excluding China)	106,984	117,959
Europe	125,062	118,990
North America	67,239	66,228
Others	3,399	2,917
Total	756,503	718,243

(Note) Sales are based on the location of customers and are classified by country or region.

b. Non-current assets

Items covered by non-current assets are property, plant and equipment, goodwill and intangible assets.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Japan	421,808	811,354
Malaysia	108,607	326,738
Asia (Excluding Malaysia)	29,297	23,591
Europe	694	37,048
North America	45,851	73,460
Total	606,257	1,272,191

(5) Major customers

Sales revenue from a single external customer who makes up 10% or more of sales revenue is as follows.

(In millions of yen)

	Name of related reportable segments	The year ended December 31, 2018	The year ended December 31, 2019
Ryosan Company, Limited	Automotive, Industrial/ Infrastructure/IoT	94,804	75,146

7. Business Combinations

(1) Business combination by acquisition

(The year ended December 31, 2019)

a. Overview of business combination

The Company resolved at the Meeting of Board of Directors to reach an agreement with IDT, whereby IDT would become a wholly-owned subsidiary of the Company and concluded a merger agreement for the purpose of implementing the acquisition on September 11, 2018. In addition, on March 30, 2019, following the completion of the acquisition, IDT has become a wholly-owned subsidiary of the Company.

1) Name and overview of the acquiree

Name of the acquiree: Integrated Device Technology, Inc.

Business overview: Development, Manufacturing and Sale of mixed signal analog integrated circuit, etc.

2) Date of the acquisition

March 30, 2019 (Pacific Daylight Time: March 29, 2019)

3) Purpose of the Acquisition

The Group has been executing its growth strategy to thrive as a world-leading embedded solution provider in the rapidly changing global semiconductor market. As the pillars of its growth strategy, the Group is accelerating its focus on the automotive segment, where the Group has maintained a key global position over many years and further growth is anticipated in areas such as autonomous driving and EV/HEV; industrial and infrastructure segments, which are expected to advance with Industry 4.0 and 5G (fifth-generation) wireless communications, as well as the fast-growing IoT segment.

In order to achieve this growth strategy, the Group is working to expand its analog solution lineup and to strengthen its kit solution offerings that combine its world-leading microcontrollers (MCUs), system-on-chips (SoCs) and analog products. In this context, the Group already completed the acquisition of Intersil Corporation (hereafter "Intersil"), a U.S.-based analog semiconductor supplier, in February 2017.

With the Intersil acquisition, the Group enhanced its lineup of power management-related analog devices as well as its ability to deliver kit solutions to customers combining the Group's MCUs/SoCs and analog products from the former Intersil. At the same time, the Group expanded its sales and design-ins outside of Japan and strengthened global management capabilities by absorbing the former Intersil's experienced management team into the Group.

The Group has made the decision to acquire IDT, a U.S.-based analog semiconductor supplier, to contribute further towards the growth strategy. IDT is a global enterprise engaged in the development, production, sale, and provision of services related to analog semiconductor products such as mixed-signal semiconductor solutions particularly for markets related to the data economy such as data center and communication infrastructure that require big-data processing. IDT has annual sales of approximately US$843 million (approximately 92.7 billion yen at an exchange rate of 110 yen to the dollar, as of March 2018) and an operating profit margin of over 25% (Non-GAAP basis).

The main strategic benefits this transaction is expected to bring are: (i) Complementary products expand the Group's solution offerings, and (ii) Expands business growth opportunities. Details are as follows:

(i) Complementary products expand the Group's solution offerings

The acquisition will provide the Group with access to a vast array of robust analog mixed-signal capabilities in embedded systems, including RF, high performance timing, memory interface, real-time interconnect, optical interconnect, wireless power and smart sensors. The combination of these product lines with the Group's advanced MCUs and SoCs and power management ICs enables the Group to offer an integrated solution that supports the increasing demand of high data processing performance. The enriched solution offerings will bring optimal systems from external sensors through analog front end to processors and interfaces.

(ii) Expands business growth opportunities.

IDT's analog mixed-signal products for data sensing, storage and interconnect are key devices that support the growth of data economy. Acquisition of these products enables the Group to extend its reach to fast-growing data economy-related applications including data center and communication infrastructure and strengthens its presence in the industrial and automotive segments.

Welcoming IDT as part of the Group after the Intersil acquisition completed in 2017 is therefore seen as an effective measure to further enhance the Group's competitiveness in fields where the Group is focusing its efforts to strengthen the Company's position as a global leader.

4) Acquisition Method

For the purpose of the acquisition, the Group had established a wholly-owned subsidiary ("acquisition subsidiary") in Delaware, United States that then merged with IDT (in a reverse triangular merger). The surviving company following the merger is IDT. Cash was issued for IDT's shares as consideration for the merger, and the shares of the acquisition subsidiary owned by the Group was converted into outstanding shares in the surviving company, making the surviving company a wholly-owned subsidiary of the Group.

b. Consideration for the acquisition and its breakdown

Consideration	(In millions of yen) Amount
Cash consideration for the acquisition	703,559
Stock options consideration for the acquisition	23,188
Total consideration for the acquisition A	726,747

Acquisition-related expenses for the business combination were 1,258 million yen, with 885 million yen recorded in “Selling, general and administrative expenses” for the fiscal year ended December 31, 2019.

c. Fair value of assets acquired, liabilities assumed and goodwill

(In millions of yen)

		Date of acquisition (March 30, 2019)
Current assets		
Cash and cash equivalents		26,326
Trade and other receivables (Note 2)		16,136
Inventories		18,808
Other		786
Total current assets		62,056
Non-current assets		
Property, plant and equipment		19,775
Intangible assets		320,276
Other		11,852
Total non-current assets		351,903
Total assets		413,959
Current liabilities		
Trade and other payables		5,121
Bonds and borrowings (Note 3)		65,262
Other		13,997
Total current liabilities		84,380
Non-current liabilities		
Income tax payables		2,599
Deferred tax liabilities		33,853
Other		3,759
Total non-current liabilities		40,211
Total liabilities		124,591
Net assets	B	289,368
Basis adjustments	C	8,598
Goodwill (Note 4)	A-B+C	445,976

(Note) 1. As of September 30, 2019, the acquisition was accounted for using provisional amounts determined based on reasonable information currently available, and since the recognition and fair value measurement of the identifiable assets acquired and liabilities assumed at the acquisition date have not been finalized, the PPA allocation is still preliminary. As of December 31, 2019, the provisional fair value has been adjusted based on reasonable information currently available. The Group has revised the amount of goodwill based on current fiscal year’s allocation of determined acquisition cost.

(In millions of yen)

Adjusted items	Adjustments of goodwill
Goodwill (before adjustment)	447,135
Deferred tax liabilities	(1,159)
Total adjustments	(1,159)
Goodwill (after adjustment)	445,976

2. The total contract amount is same as the fair value, and there are no receivables that are expected to be unrecoverable.

3. The content of bonds and borrowings is bonds. Refer to “Note 20 Bonds and Borrowings” for more details.

4. Goodwill reflects future excess earning power expected from future business development including IDT and synergies between the Company and IDT. No amount of goodwill is expected to be deductible for tax purposes.

d. Expenditure for the acquisition

(In millions of yen)

Item	Amount
Consideration for acquisition in cash	(703,559)
Cash and cash equivalents held by the acquiree at the time of obtaining control	26,326
Amount of cash paid for the acquisition of subsidiaries	(677,233)
Basis adjustments	(8,598)
Amount of cash paid for the acquisition of subsidiaries (net amount)	(685,831)

e. Impact on profit of the period on the assumption that the date of the acquisition of IDT was at the beginning of the fiscal year

Provisional pro forma information (unaudited information) on the assumption that the date of the acquisition of IDT was at the beginning of the fiscal year is as follows.

(In millions of yen)

	The year ended December 31, 2019
Revenue	745,184
Profit or loss	(8,598)

The above information has not been audited. In addition, items such as the amortization of intangible assets on the assumption that the date of the acquisition of IDT was at the beginning of the fiscal year were added to the approximate amount of impact. The pro forma information is not necessarily indicative of events that may happen in the future.

8. Cash and Cash Equivalents

The components of cash and cash equivalents are as described below. The balance of cash and cash equivalents in the consolidated statement of financial position and the balance of cash and cash equivalents in the consolidated statement of cash flows on the transition date, as of December 31, 2018 and December 31, 2019 are the same.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Cash and deposits	185,326	135,870
Short-term investments	3,494	10,598
Total	188,820	146,468

(Note) Cash and cash equivalents are classified as financial assets measured at amortized cost.

9. Trade and Other Receivables

The components of trade and other receivables are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Notes and trade receivables	76,356	81,473
Other receivables	3,141	3,081
Loss allowance	(48)	(95)
Total	79,449	84,459

(Note) Trade and other receivables are classified as financial assets measured at amortized cost.

10. Inventories

The components of inventories are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Merchandise and finished goods	37,193	28,659
Work in progress	72,725	54,841
Raw materials and supplies	5,522	6,142
Total	115,440	89,642

(Note) For write-downs of inventories previously recognized as an expense as a result of declining profitability, using the reversal method (figures in parentheses represent reversals) (1,013) million yen and 2,879 million yen were included in cost of sales in the prior fiscal year and the current fiscal year, respectively.

11. Other Assets and Liabilities

The components of other current assets and other non-current assets are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Prepaid expenses	8,122	8,786
Consumption tax receivables	3,083	2,088
Other	1,096	2,420
Total	12,301	13,294
Current assets	7,069	7,344
Non-current assets	5,232	5,950

The components of other current liabilities and other non-current liabilities are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Accrued expenses	39,788	40,527
Paid leave payables	10,710	10,336
Advances received	1,377	536
Other	5,677	8,529
Total	57,552	59,928
Current liabilities	55,384	55,528
Non-current liabilities	2,168	4,400

12. Property, Plant and Equipment

(1) Movement during the fiscal year

The changes in cost, accumulated depreciation and impairment losses, and the carrying amounts of property, plant and equipment are as follows.

a. Cost

(In millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Right-of-use assets	Land	Construction in progress	Total
Balances as of January 1, 2018	212,591	671,064	123,653	—	23,398	21,914	1,052,620
Acquisitions	85	136	3,119		—	48,719	52,059
Sales or disposal	(7,125)	(21,233)	(13,694)	—	(1,556)	(112)	(43,720)
Transfer from construction in progress	3,402	35,819	13,550	—	—	(52,771)	—

(In millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Right-of-use assets	Land	Construction in progress	Total
Exchange differences	(777)	(6,266)	(1,030)	—	(14)	(134)	(8,221)
Other	147	867	404	—	(2)	(266)	1,150
Balances as of December 31, 2018	208,323	680,387	126,002	—	21,826	17,350	1,053,888
Adjustment due to adoption of IFRS16	(45)	(9,444)	(70)	22,240	—	—	12,681
Balances as of January 1, 2019	208,278	670,943	125,932	22,240	21,826	17,350	1,066,569
Acquisitions	95	1,685	2,273	2,826	—	18,956	25,835
Acquisition due to business combination	7,504	7,156	1,290	1,161	2,023	290	19,424
Impairment losses	—	—	—	—	(26)	—	(26)
Sales or disposal	(360)	(13,628)	(5,675)	(2,902)	(9)	(59)	(22,633)
Transfer from construction in progress	1,481	12,644	9,438	—	—	(23,564)	(1)
Exchange differences	(254)	(1,561)	(485)	59	3	(23)	(2,261)
Other	28	(208)	(328)	(616)	7	(72)	(1,189)
Balances as of December 31, 2019	216,772	677,031	132,445	22,768	23,824	12,878	1,085,718

b. Accumulated depreciation and impairment losses

(In millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Right-of-use assets	Land	Construction in progress	Total
Balances as of December 31, 2018	(149,208)	(531,837)	(91,717)	—	(1,714)	(57)	(774,533)
Depreciation	(5,530)	(47,069)	(18,276)	—	—	—	(70,875)
Impairment losses	(955)	(719)	(35)	—	(726)	—	(2,435)
Sales or disposal	6,352	21,158	13,534	—	1,001	—	42,045
Exchange differences	404	3,691	646	—	—	—	4,741
Other	48	20	(396)	—	—	—	(328)
Balances as of December 21, 2018	(148,889)	(554,756)	(96,244)	—	(1,439)	(57)	(801,385)
Adjustment due to adoption of IFRS 16	21	6,477	69	(6,567)	—	—	—
Balances as of January 1, 2019	(148,868)	(548,279)	(96,175)	(6,567)	(1,439)	(57)	(801,385)
Depreciation	(5,412)	(46,237)	(17,713)	(5,581)	—	—	(74,943)
Impairment losses	(118)	(303)	(124)	—	—	—	(545)
Sales or disposal	260	13,352	5,563	2,884	—	—	22,059
Exchange differences	132	887	327	(6)	—	—	1,340
Other	10	(122)	203	244	—	—	335
Balances as of December 31, 2019	(153,996)	(580,702)	(107,919)	(9,026)	(1,439)	(57)	(853,139)

c. Carrying amount

(In millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Right-of-use assets	Land	Construction in progress	Total
Balances as of December 31, 2018	59,434	125,631	29,758	—	20,387	17,293	252,503
Adjustment due to adoption of IFRS 16	(24)	(2,967)	(1)	15,673	—	—	12,681
Balances as of January 1, 2019	59,410	122,664	29,757	15,673	20,387	17,293	265,184
Balances as of December 31, 2019	62,776	96,329	24,526	13,742	22,385	12,821	232,579

(Note) 1. The amount of property, plant and equipment under construction is presented as construction in progress.
2. For property, plant and equipment on which a mortgage is placed as collateral for liabilities, see "Note 20. Bonds and Borrowings."
3. For commitments to the acquisition of property, plant and equipment, see "Note 37. Commitments and Contingencies."
4. Depreciation is included in "Cost of sales" and "Selling, general and administrative expenses" in the consolidated statement of profit or loss.
5. Impairment losses are included in "Other expenses" in the consolidated statement of profit or loss. For details on impairment losses, see "Note 15. Impairment of Non-financial Assets."
6. There are no borrowing costs included in the cost of property, plant and equipment.

(2) Leased assets under finance leases

The carrying amounts of leased assets under finance lease arrangements included in the carrying amounts of property, plant and equipment in (1) are as follows.

(In millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Total
Balances as of January 1, 2018	30	2,846	13	2,889
Balances as of December 31, 2018	24	2,967	1	2,992
Balances as of December 31, 2019	—	—	—	—

(Note) For other information on finance leases, see "Note 14. Leases". The Group applies IFRS16 for the year ended December 31, 2019. For change in accounting policies, see "2. Basis for Preparation, (5) Change in accounting policies" and "Note 14. Leases".

13. Goodwill and Intangible Assets

(1) Movement during the fiscal year

The changes in cost, accumulated amortization and impairment losses, and the carrying amounts of goodwill and intangible assets are as follows.

a. Cost

(In millions of yen)

	Goodwill	Intangible assets					
		Software	Capitalized development costs	Developed technology	Customer relationships	Other	Total
Balances as of January 1, 2018	190,603	71,940	8,465	144,686	25,009	91,321	341,421
Internally developed	—	2,113	1,319	—	—	—	3,432
Acquisitions	—	2,864	—	—	—	1,980	4,844
Sales or disposal	—	(3,496)	(1,728)	(146)	—	(3,042)	(8,412)
Exchange differences	(3,373)	(105)	—	(2,220)	(256)	(502)	(3,083)
Other	—	62	—	—	—	—	62
Balances as of December 31, 2018	187,230	73,378	8,056	142,320	24,753	89,757	338,264
Internally developed	—	1,632	1,616	—	—	—	3,248
Acquisitions	—	2,940	—	—	—	—	2,940
Acquisition due to business combination	445,976	2,290	—	217,540	79,025	21,421	320,276
Sales or disposal	—	(2,833)	(1,371)	—	—	(1,017)	(5,221)
Exchange differences	(8,176)	(48)	—	(4,401)	(1,202)	(348)	(5,999)
Impairment losses	—	—	—	—	—	(218)	(218)
Other	—	631	—	(401)	—	572	802
Balances as of December 31, 2019	625,030	77,990	8,301	355,058	102,576	110,167	654,092

b. Accumulated amortization and impairment losses

(In millions of yen)

	Goodwill	Intangible assets					
		Software	Capitalized development costs	Developed technology	Customer relationships	Other	Total
Balances as of January 1, 2018	—	(53,289)	(4,017)	(26,648)	(11,406)	(43,659)	(139,019)
Amortization	—	(5,690)	(1,705)	(16,084)	(1,010)	(16,598)	(41,087)
Impairment losses	—	—	—	—	—	(331)	(331)
Sales or disposal	—	3,365	1,728	146	—	2,987	8,226
Exchange differences	—	78	—	145	10	242	475
Other	—	(5)	—	—	—	1	(4)
Balances as of December 31, 2018	—	(55,541)	(3,994)	(42,441)	(12,406)	(57,358)	(171,740)
Amortization	—	(6,534)	(1,730)	(39,971)	(5,278)	(18.523)	(72,036)
Impairment losses	—	—	—	—	—	(1,353)	(1,353)
Sales or disposal	—	2,771	1,371	401	—	428	4,971
Exchange differences	—	37	—	306	22	(111)	254
Other	—	199	—	—	—	195	394
Balances as of December 31, 2019	—	(59,068)	(4,353)	(81,705)	(17,662)	(76,722)	(239,510)

c. Carrying amount

(In millions of yen)

	Goodwill	Intangible assets					
		Software	Capitalized development costs	Developed technology	Customer relationships	Other	Total
Balances as of January 1, 2018	190,603	18,651	4,448	118,038	13,603	47,662	202,402
Balances as of December 31, 2018	187,230	17,837	4,062	99,879	12,347	32,399	166,524
Balances as of December 31, 2019	625,030	18,922	3,948	273,353	84,914	33,445	414,582

(Note) 1. Of software in intangible assets, the carrying amount classified as internally generated assets was 797 million yen as of December 31, 2018 and 856 million yen as of December 31, 2019.
2. Construction in progress is included in "Software" under intangible assets.
3. Technical resources acquired through installment transactions are included in "Other" under intangible assets.
4. There are no intangible assets with restrictions on ownership or intangible assets on which a mortgage is placed as collateral for liabilities.
5. For commitments to the acquisition of intangible assets, see "Note 37. Commitments and Contingencies."
6. Amortization of intangible assets is included in "Cost of sales" and "Selling, general and administrative expenses" in the consolidated statement of profit or loss.
7. Impairment losses are included in "Other expenses" in the consolidated statement of profit or loss. For details on impairment losses, see "Note 15. Impairment of Non-financial Assets."

(2) Significant intangible assets

Major intangible assets are developed technology acquired in the business combination with Intersil in February 2017 and IDT in March 2019. The carrying amount of developed technology acquired in the business combination was 97,413 million yen as of December 31, 2018 and 272,916 million yen as of December 31, 2019, and the remaining amortization period as of December 31, 2019 is 4 to 11 years.

(3) Intangible assets with indefinite useful lives

The carrying amount of intangible assets with indefinite useful lives is included in "Other" and was 2,720 million yen as of December 31, 2018 and 16,982 million yen as of December 31, 2019, and research and development under work-in-process. In addition, for certain research and development under work-in-process, since the development has been completed and the assets have been put to operational use, amortization of these assets has been recognized as of December 31, 2019.

14. Leases

(1) Leases as lessee

a. Lease expenses, income and cashflows

Lease expenses, income and cashflows are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Depreciation charge for right-of-use assets by class of underlying asset		
Land	—	93
Buildings	—	2,732
Machinery, equipment and vehicles	—	2,586
Tools, furniture and fixtures	—	170
Total	—	5,581
Interest expense on lease liabilities	—	(251)
Expense relating to short-term leases	—	(2,645)

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Expense relating to leases of low-value assets (excluding short-term leases)	—	(493)
Expense relating to variable lease payments which are not reflected in the measurement of lease liabilities	—	—
Income from subleasing right-of-use assets	—	—
Total cash outflows for leases	—	(9,086)
Gain or loss from sale and leaseback transactions	—	—

b. Right-of-use assets which are included in the carrying amount of property, plant and equipment
The carrying amount and the increase/decrease in carrying amount of right-of-use assets which are included in the carrying amount of property, plant and equipment are as follows.

(In millions of yen)

	Balance as of January 1, 2019	Balance as of December 31, 2019
Land	346	268
Buildings	9,181	9,525
Machinery, equipment and vehicles	5,909	3,763
Tools, furniture and fixtures	237	186
Total	15,673	13,742

(Note) The increased amount of right-of-use assets for the fiscal year ended December 31, 2019 was 2,826 million yen.

c. Nature of the leasing activities
The Group leases land, Building, and Machinery, equipment and vehicles.
The terms of lease contracts are negotiated individually and include a wide variety of the terms of contracts.

d. Options of extension and termination
The options of extension and termination are included in many lease contracts for buildings, and machinery and equipment. The lease term for office buildings are mainly from 3 to 10 years and for machinery and equipment, its term is from 3 to 5 years and some contracts include an option to extend one year or the same lease years for the current lease contract after the termination date.

These options will be utilized to maximize operational flexibility from the point of asset management used in the Group's businesses.

15. Impairment of Non-financial Assets

The Group recorded impairment losses for the assets below. Impairment loss is included in "Other expenses" in the consolidated statement of profit or loss.

The components of assets for which the impairment losses are recorded are as follows. The impairment losses for the fiscal year ended December 31, 2018 have been prepared pursuant to the reporting segment classification subsequent to the changes.

The year ended December 31, 2018

(In millions of yen)

	Reportable segments		Total
	Automotive	Industrial/ Infrastructure/IoT	
Property, plant and equipment	1,575	860	2,435
Intangible assets	175	156	331
Other	212	115	327
Total impairment loss	1,962	1,131	3,093

The year ended December 31, 2019

(In millions of yen)

	Reportable segments		Total
	Automotive	Industrial/ Infrastructure/IoT	
Property, plant and equipment	371	203	574
Intangible assets	846	751	1,597
Other	55	30	85
Total impairment loss	1,272	984	2,256

(1) Impairment losses

The Group generally makes a grouping according to the minimum independent cash-generating, based on the categories used for business management, and makes a grouping by each individual asset for significant idle assets and operational assets that are unlikely to be used, etc.

For the year ended December 31, 2018

(Assets to be disposed of)

For the Automotive and Industrial/Infrastructure/IoT business, the Group is implementing business and production structural reforms to build a stronger revenue structure and performs impairment tests as independent cash-generating units for the assets that have been decided to be transferred and assets to be disposed of that have become unlikely to be used associated with the policy of consolidating the production sites and eliminating and consolidating the operating bases, and writes down the carrying amount of assets such as the Kofu Plant whose market value has declined significantly to their recoverable amount. As a result, the Group has recorded impairment losses of 1,744 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is measured at the expected sales amount, and the hierarchy level of the fair value is 3.

(Idle assets)

For the Automotive and Industrial/Infrastructure/IoT business, the Group has performed impairment tests as independent cash-generation units, written down the carrying amount of idle assets that are unlikely to be used to their recoverable amount, and recorded impairment losses of 1,018 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is set at zero because it is difficult to sell these assets, and the hierarchy level of the fair value is 3.

(Operational assets)

For the Automotive and Industrial/Infrastructure/IoT business, the Group has performed impairment tests as independent cash-generation units, written down the carrying amount of idle assets that are unlikely to be used to their recoverable amount, and recorded impairment losses of 331 million yen. The component of assets by category is “Intangible assets” 331 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is set at zero because it is difficult to sell these assets, and the hierarchy level of the fair value is 3.

For the year ended December 31, 2019

(Idle assets)

For the Automotive and Industrial/Infrastructure/IoT business, the Group has performed impairment tests as independent cash-generation units, written down the carrying amount of idle assets that are unlikely to be used to their recoverable amount, and recorded impairment losses of 317 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is set at zero because it is difficult to sell these assets, and the hierarchy level of the fair value is 3.

(Operational assets)

For the Automotive and Industrial/Infrastructure/IoT business, the Group has performed impairment tests as independent cash-generation units, written down the carrying amount of idle assets that are unlikely to be used to their recoverable amount, and recorded impairment losses of 1,939 million yen.

The recoverable amount is measured at the fair value after deducting disposal costs. The fair value after deducting disposal costs is set at zero because it is difficult to sell these assets, and the hierarchy level of the fair value is 3.

(2) Impairment test of goodwill and intangible assets with indefinite useful lives

The Group performs impairment tests for groups of cash-generating units to which goodwill and intangible assets with indefinite useful lives are allocated at a certain time each fiscal year and whenever there is any indication of impairment.

The goodwill in the consolidated statement of financial position was recognized when the Company merged with Intersil for the fiscal year ended December 31, 2017 and IDT for the fiscal year ended December 31, 2019 and it's allocated to the group of cash-generating units of the Group expected to provide future excess earning power arising from synergies of these business combinations.

In the impairment test, goodwill and intangible assets with indefinite useful lives that were allocated to the cash-generating units or the group of cash-generating units of the Group are as follows.

(In millions of yen)

	Reportable segments	Group of cash-generating units	As of December 31, 2018	As of December 31, 2019
Goodwill	Automotive	Automotive	73,376	244,950
	Industrial/ Infrastructure/IoT	Industrial/ Infrastructure/IoT	113,854	380,080
Research and development under work-in-process	Automotive	Automotive	—	3,287
	Industrial/ Infrastructure/IoT	Industrial/ Infrastructure/IoT	2,720	13,695

The recoverable amount of the cash-generating units or the group of cash-generating units is measured at the value in use. The value in use is calculated by discounting the estimated amount of cash flows based on a business plan and a growth rate in the future that are approved by the management, reflecting past experiences and external information, to the present value. The discount rates are the weighted average capital cost before tax. The discount rates used for the calculation of the value in use are 11.5% in the prior fiscal year and 9.8% in the current fiscal year.

In the estimation of cash flows, for cash flows in a period beyond the projected period that is approved by the management, the value in use is calculated with the growth rate as 2.0% both in the prior fiscal year and the current fiscal year . The approved growth rate used for the estimation for the period exceeding the approved business plan is determined based on the estimated inflation rate of the market to which the cash-generating units or the group of cash-generating units belong.

Because the recoverable amount of the group of cash-generating units sufficiently exceeds the carrying amount in the current fiscal year, management believes that it is unlikely that the recoverable amount of the cash-generating units or the group of cash-generating units will fall below the carrying amount even if the major assumptions used in the impairment test are changed in a reasonable range.

In addition, the major assumptions (Inflation rate/ Discount rate before tax) in a reasonable range used in the impairment test are as follows.

Major assumptions	Prior fiscal year	Current fiscal year
Inflation rate	1.5~2.5%	1.5~2.5%
Discount rate before tax	10.5~12.5%	8.8~10.8%

For certain research and development under work-in-process that were acquired in a business combination, since such assets are not yet available to use, the Group performs impairment test at a certain time each fiscal year and whenever there is any indication of impairment. The Group recognizes impairment losses in case the value in use of the cash-generating units fall below the carrying amount based on the result of the impairment test conducted during the fiscal year.

16. Investments accounted for using the equity method

(1) Major associates

The major associate of the Group to which the equity method is applied is as follows. For the prior fiscal year, the Group has excluded RENESAS EASTON Co., Ltd. from the scope of application of the equity method due to the reduction of the Group's portion of shares.

Because the closing date of the above entity accounted for using the equity method is different from that of the consolidated financial statements, its financial statements prepared with a provisional closing date, which is same as that of consolidated financial statements, are used.

Name	Country	Ownership interest (%)	
		As of December 31, 2018	As of December 31, 2019
RENESAS EASTON Co., Ltd. . . .	Japan	5.54	—

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Profit for the year	49	—
Other comprehensive income	(26)	—
Total comprehensive income for the year	23	—

17. Other Financial Assets

(1) Components of other financial assets

The components of other financial assets are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Stocks (Note 1)	3,262	3,926
Investment trust (Note 2)	—	3,967
Long-term receivables (Other) (Note 3)	1,776	1,244
Other (Note 4)	1,429	1,326
Total	6,467	10,463
Current assets	494	468
Non-current assets	5,973	9,995

(Note) 1. Stocks are classified either as equity instruments measured at fair value through other comprehensive income or financial assets measured at fair value through profit or loss. (see "Note 34. Financial Instruments").

2. Investment trust is classified as Financial assets measured at fair value through profit or loss.
3. Financial assets measured at amortized cost are included in "Long-term receivables (Other)"
4. Term deposits with a deposit term of more than three months, security deposits and long-term accounts receivable are included in "Other." These assets are classified as financial assets measured at amortized cost.

(2) Equity instruments measured at fair value through other comprehensive income

The Group mainly designates stocks that are expected to be held over the long term, etc. that are for investment by an incentive plan for directors and some employees of subsidiaries as equity instruments measured at fair value through other comprehensive income.

Name of major equity instruments and their fair value measured at fair value through other comprehensive income are as follows.

(In millions of yen)

Company name	As of December 31, 2018	As of December 31, 2019
Shanghai Walden Venture Capital Enterprise	1,155	—
LeddarTech Inc.	—	1,096

(3) Derecognized equity instruments measured at fair value through other comprehensive income

The fair value and cumulative gains or losses (before tax) as of the date of derecognition of equity instruments measured at fair value through other comprehensive income that were derecognized during the period are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Fair value	3,176	606
Cumulative gains or losses	84	(175)

(Note) 1. With a view to investment by the incentive plan for directors and some employees of subsidiaries, the Group disposed of part of the equity instruments measured at fair value through other comprehensive income by selling them and derecognized them in the prior fiscal year and the current fiscal year.
2. If equity instruments measured at fair value through other comprehensive income are derecognized, cumulative gains or losses (after tax) previously recognized in other comprehensive income are reclassified to retained earnings. The corresponding gain (loss) was (169) million yen in the prior fiscal year and 118 million yen in the current fiscal year.
3. For dividend income received from equity instruments measured at fair value through other comprehensive income, see “Note 29. Finance Income and Finance Costs”.

18. Income Taxes

(1) Components of and changes in deferred tax assets and deferred tax liabilities

The components of and changes in deferred tax assets and deferred tax liabilities by major causes of their occurrence are as follows.

	As of December 31, 2017	Recognized in profit or loss	Recognized in other comprehensive income	Business combination	As of December 31, 2018
Deferred tax assets					
Inventories	8,385	(1,561)	—	—	6,824
Fixed assets	7,665	(2,255)	—	—	5,410
Research and development expense	2,098	(454)	—	—	1,644
Accrued expenses	9,716	1,076	—	—	10,792
Retirement benefits liabilities	7,084	(2,550)	1,824	—	6,358
Carryforward of unused tax losses	37,454	(5,944)	—	—	31,510
Carryforward of unused tax credits	3,837	(960)	—	—	2,877
Other	8,671	(863)	—	—	7,808
Subtotal	84,910	(13,511)	1,824	—	73,223
Deferred tax liabilities					
Fixed assets	(37,793)	1,470	—	—	(36,323)
Tax on undistributed earnings	(4,495)	(980)	—	—	(5,475)
Total income from specified foreign subsidiaries, etc.	(3,448)	(802)	—	—	(4,250)
Other	(2,656)	856	20	—	(1,780)
Subtotal	(48,392)	544	20	—	(47,828)
Net deferred tax assets (liabilities)	36,518	(12,967)	1,844	—	25,395

	As of December 31, 2018	Recognized in profit or loss	Recognized in other comprehensive income	Business combination	As of December 31, 2019
Deferred tax assets					
Inventories	6,824	(646)	—	1	6,179
Fixed assets	5,410	(79)	—	117	5,448
Research and development expense	1,644	(229)	—	—	1,415
Accrued expenses	10,792	(1,247)	—	1,339	10,884
Retirement benefits liabilities	6,358	(641)	788	—	6,505
Carryforward of unused tax losses	31,510	(5,813)	—	4,253	29,950
Carryforward of unused tax credits	2,877	1,428	—	793	5,098
Other	7,808	4,654	—	(273)	12,189
Subtotal	73,223	(2,573)	788	6,230	77,668
Deferred tax liabilities					
Fixed assets	(36,323)	4,890	—	(33,424)	(64,857)
Tax on undistributed earnings	(5,475)	(512)	—	—	(5,987)
Total income from specified foreign subsidiaries, etc.	(4,250)	3,338	—	—	(912)
Other	(1,780)	(583)	27	(429)	(2,765)
Subtotal	(47,828)	7,133	27	(33,853)	(74,521)
Net deferred tax assets (liabilities)	25,395	4,560	815	(27,623)	3,147

(Note) The Group considers the possibility that a portion of, or all of, the deductible temporary differences or carryforward of unused tax losses can be utilized against future taxable profits in the recognition of deferred tax assets.
The differences between total amount recognized in profit or loss and total amount of the deferred tax expenses are due to changes in foreign exchange rate.

(2) Deductible temporary differences, etc. for which no deferred tax assets are recognized

The amounts of deductible temporary differences, carryforward of unused tax losses and carryforward of unused tax credits for which no deferred tax assets are recognized are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Deductible temporary differences	16,325	—
Carryforward of unused tax losses	396,006	342,697
Carryforward of unused tax credits	9,934	16,542
Total	422,265	359,239

(Note) Deductible temporary differences and carryforward of unused tax losses are measured on an income basis, and carryforward of unused tax credits is measured on a tax amount basis.

The expiration schedule of the carryforward of unused tax losses for which no deferred tax assets are recognized is as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
First year	81,195	142,499
Second year	127,638	182,023
Third year	178,811	7,780
Fourth year	—	—
Fifth year or thereafter	8,362	10,395
Total	396,006	342,697

The expiration schedule of the carryforward of unused tax credits for which no deferred tax assets are recognized is as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
First year	1,191	316
Second year	206	—
Third year	—	—
Fourth year	—	—
Fifth year or thereafter	8,537	16,226
Total	9,934	16,542

The Group adopts the consolidated taxation system in Japan. The above figures do not include the amount of the carryforward of unused tax losses for which no deferred tax asset is recognized for local taxes (residential tax and business tax) that are not subject to the consolidated taxation system in Japan. The amount of the carryforward of unused tax losses for local taxes (residential tax and business tax) was 13,361 million yen for residential tax and 457,982 million yen for business tax in the prior fiscal year (as of December 31, 2018) and 12,249 million yen for residential tax and 398,074 million yen for business tax in the current fiscal year (as of December 31, 2019).

(3) Components of income tax

The components of income tax are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Current tax expense		
Current tax expense	8,776	8,869
Tax expense from previous periods	(5,199)	1,471
Total current tax expense	3,577	10,340
Deferred tax expense		
Origination and reversal of temporary differences	56,795	(7,119)
Effects from tax regulation changes	(36)	(104)
Revaluation of deferred tax assets	(45,415)	2,551
Other	1,743	414
Total deferred tax expense	13,087	(4,258)
Total income tax	16,664	6,082

(Note) 1. Current tax expense includes the amount of previously unrecognized tax loss, tax credits or temporary differences of a prior period, and decreases by 10,859 million yen and 2,732 million yen in the prior fiscal year and the current fiscal year, respectively.
2. Current deferred tax expense in the prior fiscal year and the current fiscal year does not include the amount of previously unrecognized tax loss, tax credits or temporary differences of a prior period
3. Current deferred tax expense includes the amount of previously unrecognized tax loss, tax credits or temporary differences of a prior period, and increases by 4,336 million yen and 6,566 million yen in the prior fiscal year and the current fiscal year, respectively.

(4) Reconciliation of the statutory effective tax rate and the average effective tax rate

The reconciliation of the statutory effective tax rate and the average effective tax rate is as follows.

(%)

	The year ended December 31, 2018	The year ended December 31, 2019
Statutory effective tax rate (Note)	30.9	31.5
Changes in unrecognized deferred tax assets	(2.2)	554.0
Permanent differences	(2.2)	(548.4)
Foreign tax rate differences	(3.9)	3,165.8
Tax credits	(5.0)	(1,088.2)
Tax on undistributed earnings	1.5	199.2
Effects from tax regulation changes	2.3	—
Other	3.2	52.2
Average effective tax rate	24.6	2,366.1

(Note) The applicable statutory effective tax rate is the sum of 23.1% for national taxes and 8.4% for local taxes.

Major taxes imposed on the Company and its subsidiaries in Japan are income tax, residential tax and business tax. The applicable statutory effective tax rate in Japan was 30.9% in the prior fiscal year and 31.5% in the current fiscal year. Income tax, etc. rates applicable to overseas subsidiaries are calculated based on local tax rates in their location.

The Group has business in multiple tax areas and the profit before tax and income tax expenses in Japan differ materially from those in the other tax areas especially for the fiscal year ended December 31, 2019. Therefore, the average effective tax rate becomes significantly larger than the statutory effective tax rate.

19. Trade and Other Payables

The components of trade and other payables are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Trade payables	59,579	64,740
Other payables	41,682	16,974
Electronically recorded obligations	16,323	16,725
Refund liabilities	3,052	2,593
Total	120,636	101,032
Current liabilities	116,233	100,187
Non-current liabilities	4,403	845

(Note) Trade and other payables are classified as financial liabilities measured at amortized cost.

20. Bonds and Borrowings

(1) Bonds

Following the acquisition of IDT, an amount of 588 million USD (65,262 million yen) of convertible bonds issued on November 1, 2015 by IDT (Total amount issued: 374 million USD (41,483 million yen), interest rate: 0.875%, redemption date: November 22, 2022) has been recognized by measuring at fair value in the financial statements for the three months ended March 31, 2019 and retirement by purchase has been performed during the three months ended June 30, 2019.

(2) The components of borrowings are as follows.

a. Short-term borrowings

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Syndicated loan ex-C	45,000	—

b. Long-term borrowings

(In millions of yen)

	Maturity	Average interest rate	As of December 31, 2018	As of December 31, 2019
Syndicated loan ex-B	From Sep.2016 to Sep.2021		147,742	—
Syndicated loan A	From Mar.2019 to Mar.2024	0.82%	—	395,973
Syndicated loan B	From Mar.2019 to Mar.2024	0.82%	—	232,150
Syndicated loan C	From Jun.2019 to Jun.2024	0.82%	—	148,975
Total			147,742	777,098
Arrangement fee			(494)	(5,351)
Current liabilities			—	(93,170)
Non-current liabilities			147,248	678,577

(Note) 1. Borrowings are classified as financial liabilities measured at amortized cost.
2. For the balance of borrowings by maturity, see "Note 34. Financial Instruments".
3. For the average interest rate, the weighted average interest rate on the balance of borrowings at the end of the current fiscal year is stated.
4. Financial covenants are included in borrowings.
5. In order to refinance the existing borrowings to finance partial funds necessary for the acquisition and working capital as the medium-and-long term funds, the Company has entered into a syndicated loan agreement with the total amount of 897,000 million yen on January 15, 2019. During the three months ended March 31, 2019, 698,000 million yen of term loan with availability period (Implementation date: March 28, 2019, Repayment date: March 28, 2024, participating financial institutions: MUFG Bank, Ltd., Mizuho Bank, Ltd., Sumitomo Mitsui Trust Bank, Limited and other 5 financial institutions) has been executed. In addition, during the three months ended June 30, 2019, borrowings of 149,000 million yen of term loan (Implementation date: June 28, 2019, Repayment date: June 28, 2024, participating financial institutions: MUFG Bank, Ltd., Mizuho Bank, Ltd., Sumitomo Mitsui Trust Bank, Limited) have been conducted to refinance the existing term loan.

(3) Assets pledged as collateral and corresponding liabilities on the transition date and as of each fiscal year end are as follows.

a. Assets pledged as collateral

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Buildings, and structures	40,587	38,329
Machinery, equipment and vehicles	68,323	50,872
Land	16,845	16,811
Total	125,755	106,012

(Note) Other than the above, stock of subsidiary of 802,492 million yen has been eliminated on consolidation is collateralized.

b. Liabilities corresponding to assets pledged as collateral

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Short-term borrowings	45,000	—
Current portion of long-term borrowings	—	93,170
Long-term borrowings (excluding current portion)	147,248	678,577
Total	192,248	771,747

21. Other Financial Liabilities

The components of other financial liabilities are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Derivative liabilities (Note 1)	14,318	—
Lease obligations (Note 2)	2,762	14,155
Other	300	300
Total	17,380	14,455
Current liabilities	15,057	4,362
Non-current liabilities	2,323	10,093

(Note) 1. Derivative liabilities are classified as financial liabilities measured at fair value through other comprehensive income, except for those for which hedge accounting is applicable (see "Note 34. Financial Instruments").

2. The Group has applied IFRS16 for the fiscal year ended December 31, 2019 and applied IAS 17 and IFRIC14 for the fiscal year ended December 31, 2018. For information on lease obligations, see "Note 14. Leases".

22. Provisions

The components of provisions and their changes are as follows.

(In millions of yen)

	Asset retirement obligations	Provision for business structure improvement	Provision for product warranties	Provision for loss on litigation	Other	Total
Balances as of December 31, 2018	3,000	1,238	206	6,410	3	10,857
Current liabilities	43	1,050	206	5,810	3	7,112
Non-current liabilities	2,957	188	—	600	—	3,745
Increase during the period	68	5,028	410	693	—	6,199
Decrease during the period (utilization)	(18)	(3,256)	(381)	(1,961)	(3)	(5,619)
Decrease during the period (reversal)	(20)	(77)	—	—	—	(97)
Period interest expense in discount calculation	7	—	—	—	—	7
Increase due to business combination	—	137	16	—	—	153
Other	(9)	(31)	(2)	(77)	—	(119)
Balances as of December 31, 2019	3,028	3,039	249	5,065	—	11,381
Current liabilities	59	2,898	249	4,315	—	7,521
Non-current liabilities	2,969	141	—	750	—	3,860

a. Asset retirement obligations

The amount expected arising from performing obligations necessary to restore assets to their original state under the real estate lease agreements of offices and plants used by the Group and legal obligations to remove hazardous substances related to fixed assets is recorded as a provision. The amount of asset retirement obligations was computed using an estimated useful life of 3 to 47 years as well as a discount rate of 0.1% to 0.5%, although the timing of payments will be affected by future business plans, etc.

b. Provision for business structure improvement

Provision for business structure improvement is established in preparation for expected future losses in connection with business structure reform and consolidation, and estimated losses are recorded. The timing of payments will be affected by future business plans, etc.

c. Provision for product warranties

The Group accrues product warranty liabilities for estimated future warranty costs using the individual estimates for the specific matters as well as the historical ratio of warranty costs to net sales.

d. Provision for loss on litigation

The Group records the estimated amount of reasonably calculated losses, examining individual risks, in preparation for losses on litigation, etc. that could arise in the future from lawsuits and disputed cases. (Refer to “Note 37. Commitments and Contingencies, (4) Others” considering the policy for extended disclosure for Contingencies)

23. Employee Benefits

The Group adopts post-employment benefit plans such as a defined benefit plan and a defined contribution plan, except for some overseas consolidated subsidiaries.

(1) Defined benefit plans

a. Characteristics of defined benefit plans and related risks

The characteristics of defined benefit plans and related risks are as follows.

(a) Characteristics of defined benefit plans

The defined benefit plans of the Company and its subsidiaries in the Group include (i) a severance indemnity plan and (ii) a defined benefit corporate pension plan. The Group may also provide premium severance pay upon the retirement of employees.

(i) The severance indemnity plan is an unfunded plan to make a lump-sum payment only with an internal reserve without making an external reserve for the obligations of the retirement benefit plans. As the lump-sum payment, an amount based on salaries and number of service years in accordance with the retirement allowance regulations including the rules of employment of each company is paid.

(ii) The defined benefit corporate pension plan is a defined benefit pension and a funded plan established under the Defined Benefit Corporate Pension Act (enforced in April 2002). It is a fund-type corporate pension, and a lump-sum payment or an annuity is paid from the fund based on salaries and number of service years. In the defined benefit corporate pension plan, administrators of the corporate pension, such as the executive directors of the employer and the fund, abide by laws, regulations and asset management and investment contracts, etc., and their standards of practice such as the prohibition of acts involving conflicts of interest against the participants in the plan have been clearly defined.In the defined benefit corporate pension plan, the amount of benefits is calculated based on the cumulative number of points granted to employees according to their job classification. The Company and its subsidiaries in Japan adopt a cash balance pension plan for the defined benefit corporate pension plan. Under the cash balance pension plan, each participant has an account in which a certain amount calculated by the revaluation rate that is determined based on the current base salary, the job classification and the market interest rate is accumulated.

(b) Risks to which an entity is exposed by the plan

The Group is exposed to actuarial risks such as price fluctuation risk by plan assets, interest rate risk and life expectancy rate risk by present value of obligations of the defined benefit plans.

b. Amounts recognized in the consolidated statement of financial position

The amounts recognized in the consolidated statement of financial position are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Present value of obligations of the funded defined benefit plans (with plan assets)	132,173	127,397
Fair value of plan assets	(142,218)	(144,613)
Funded status	(10,045)	(17,216)
Impact of asset ceiling	10,724	17,989
Present value of obligations of the unfunded defined benefit plans (without plan assets)	32,073	28,799
Net amount of liabilities (assets) pertaining to defined benefits recognized in the consolidated statement of financial position	32,752	29,572
Liabilities pertaining to retirement benefits	32,752	29,572
Assets pertaining to retirement benefits	—	—

c. Changes in the present value of defined benefit obligation

The changes in the present value of defined benefit obligation are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Present value of defined benefit obligation (beginning)	167,861	164,246
Service cost	3,009	2,835
Interest expense	1,124	1,131
Benefits paid	(6,674)	(16,739)
Remeasurements of defined benefit plans		
(i) Actuarial differences arising from changes in demographic assumptions	551	2,408
(ii) Actuarial differences arising from changes in financial assumptions	(908)	2,617
(iii) Revisions to other results	383	(175)
Exchange differences	(1,766)	82
Other	666	(209)
Present value of defined benefit obligation (ending)	164,246	156,196

The weighted average duration of the defined benefit obligation in each fiscal year is as follows.

	The year ended December 31, 2018	The year ended December 31, 2019
Weighted average duration	12.4 years	12.4 years

d. Changes in the fair value of plan assets

Changes in the fair value of plan assets are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Fair value of plan assets (beginning)	145,125	142,218
Interest income	1,009	1,024
Remeasurement – Return on plan assets	(6,528)	7,900
Contributions by employer (Note 1)	8,867	5,830
Benefits paid	(5,194)	(12,570)
Exchange differences	(1,582)	408
Other	521	(197)
Fair value of plan assets (ending)	142,218	144,613

(Note) 1. Contributions to the defined benefit plans in the Group are made in consideration of factors such as the financial position of the Company, the funding situation of plan assets and actuarial factors based on laws and regulations.
In the fiscal year ending December 31, 2020, 2,245 million yen is planned to be contributed to the defined benefit pension plans.
2. The purpose of the investment of plan assets of the Group is to secure necessary revenue in the long term within the acceptable range of risks in order to provide benefits to beneficiaries reliably in the future.
The target rate of return aims to exceed the assumed interest rate required for the financial position of the pension scheme on a stable basis for the long term.
The Group has set a "policy asset mix" to achieve the investment target and attempts to make an investment to maintain the asset mix based on the policy asset mix. The asset mix is reviewed as necessary and tailored to changes in the situation of the Group and the institution and the environment surrounding the Group.
3. Some consolidated subsidiaries participate in a multi-employer defined benefit pension plan.

e. Changes in the impact of the asset ceiling
The changes in the impact of the asset ceiling are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Impact of asset ceiling (beginning)	(11,553)	(10,724)
Interest income	(113)	(136)
Remeasurement – Changes in the impact of the asset ceiling	691	(6,933)
Exchange differences	287	(93)
Other	(36)	(103)
Impact of the asset ceiling (ending)	(10,724)	(17,989)

(Note) The Group sets the asset ceiling and calculates liabilities in some of its pension plans because economic benefits could not be enjoyed as a result of contributions that will not be reduced or returned in the future.

f. Components of fair value of plan assets by type
The components of the fair value of plan assets by type are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Equity instruments		
Domestic equity securities	14,808	15,617
Foreign equity securities	17,341	19,631
Debt instruments		
Domestic bonds	12,647	12,841
Foreign bonds	35,127	32,393
General accounts of life insurance company	25,659	26,013
Cash and cash equivalents	15,342	14,192
Other	21,294	23,926
Total	142,218	144,613

(Note) Most of plan assets are operated through commingled funds and classified as those with no public market price in active markets. These commingled funds are appropriately diversified into stocks and debts etc. mainly listed in active market based on corporate pension fund code. "General accounts of life insurance company" are the accounts that the life insurance company jointly manages the funds with several contracts and includes a guaranteed interest rate and return of capital. The major components of "Other" represent alternative instruments that are invested using long/short positions and securitized products, etc. As for disclosure of the plan assets, since the Group has certain shares against the funds rather than direct investment in the funds, the change to disclosure as commingled funds has been reflected from the year ended December 31, 2019, though the investment types operated by the commingled funds were disclosed until the year ended December 31, 2018.

g. Major actuarial assumptions

Major actuarial assumptions (weighted average) are as follows.

	As of December 31, 2018	As of December 31, 2019
Discount rate	0.7%	0.7%

h. Sensitivity analysis

In the calculation of the defined benefit obligation in the sensitivity analysis, the same method as the calculation method for the defined benefit obligation recognized in the consolidated statement of financial position is used.

The sensitivity analysis is made based on changes in assumptions that can be reasonably presumed at the end of the reporting period. In addition, although the sensitivity analysis assumes that all actuarial assumptions other than those that are subject to the sensitivity analysis remain constant, changes in those other actuarial assumptions could have an impact in reality.

The impact of a 0.5% change in actuarial assumptions on the defined benefit obligation is as follows.

(In millions of yen)

		As of December 31, 2018	As of December 31, 2019
Discount rate	0.5% increase	(9,765)	(8,215)
	0.5% decrease	8,676	9,060

(2) Defined contribution plans

The Group has adopted defined contribution pension plans. The amount recognized as an expense in relation to the defined contribution plans, including employee pension premiums paid by the employer under the Employees' Pension Insurance Act, is as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Contributions	10,390	8,963

(Note) This amount is included in "Cost of sales" and "Selling, general and administrative expenses" in the consolidated statement of profit or loss.

(3) Employee benefits expense

The components of the employee benefits expense are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Personnel expenses	153,765	159,580
Retirement benefit expenses	13,627	12,041
Expenses for extra retirement benefits	1,598	11,800
Other	2,049	2,736
Total	171,039	186,157

(Note) This amount is included in "Cost of sales" and "Selling, general and administrative expenses" in the consolidated statement of profit or loss.

24. Equity and Other Equity Items

(1) Issued capital and treasury shares

Ordinary shares

	Total number of authorized shares (shares)	Total number of issued shares (shares)	Treasury shares (shares)
As of December 31, 2018	3,400,000,000	1,668,385,390	2,581
Changes (Note 2)	—	41,891,400	—
As of December 31, 2019	3,400,000,000	1,710,276,790	2,581

(Note) 1. All the shares issued by the Company are non-par value ordinary shares with no restrictions on rights.

2. Changes are due to the exercise of stock options. As to stock options, see "Note 33. Share-based Payments".

3. Total number of issued shares has been already paid-up.

(2) Reserves

a. Share premium

The Companies Act of Japan stipulates that one half or more of the paid-in amount from the issue of shares shall be accounted for as issued capital, and the remainder shall be accounted for as capital reserve included in share premium. Under the Companies Act, the amount of such capital reserve may be transferred to issued capital by the resolution of a shareholders meeting.

b. Retained earnings

The Companies Act of Japan stipulates that one tenth of the amount of the distributions of surplus shall be accumulated as capital reserve or legal reserve until the sum of the capital reserve and legal reserve reaches one fourth of the issued capital. The accumulated retained earnings reserve may be appropriated to cover a loss. The Companies Act also states that the retained earnings reserve may be used by the resolution of a shareholders meeting.

25. Revenue

(1) Disaggregation of revenue

Disaggregation of revenue recognized from contracts with customers are stated in "Note 6. Business Segments, (2) Information on reportable segments and (4) Information on regions and countries". Also, all of the revenue arises from contracts with customers.

The Group engages in research, design, development, manufacturing, sales and services related to various kinds of semiconductors as a manufacturer specializing in semiconductors, and the revenue is mainly due to sales of semiconductor products.

Regarding the sales of these products, the Group recognizes revenue when the customer obtains control over the product, i.e., at the time of delivery of a product because legal title of the product, physical possession of the asset, the significant risks and rewards of ownership are transferred to the customer, and the customer has an obligation to pay for the products at the time of delivery of the product.

Revenue is measured at the amount of promised consideration in contracts with customers.

With regard to sales contract including variable consideration such as rebate and discounts, etc., the transaction price is estimated and determined using the most-likely-amount method based largely on historical data, considering variable prices within a range that will not result in significant deviation between estimate and historical data.

Consideration under sales contracts is recovered mainly within one year from satisfaction of a performance obligation and includes no significant financing components.

(2) Accounts arising from contracts

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Contract assets	—	—
Contract liability	788	1,688

(Note) 1. Contract liability relates to the payment received in advance of performance under the contract. The contract liabilities are reclassified to revenue when the Group satisfies a performance obligation based on the contract.

2. The amounts of revenues recognized during the prior fiscal year and the current fiscal year from the performance obligations satisfied in the past periods were immaterial.

3. Of the revenues recognized in the prior fiscal year, 681 million yen was included in the balance of contract liabilities as of January 1, 2018. In addition, of the revenues recognized in the current fiscal year, 269 million yen was included in the balance of contract liabilities as of January 1, 2019.

(3) Transaction price allocated to the remaining performance obligation

The Group uses the practical expedient of omitting the disclosure of information on the remaining performance obligations because it has no significant transactions with individual expected contractual terms exceeding one year. In addition, there are no significant amounts in consideration from contracts with customers that are not included in transaction prices.

(4) Assets recognized from the cost to obtain or fulfill contracts with customers

There are no assets recognized from the cost to obtain or fulfill contracts with customers.

26. Selling, General and Administrative Expenses

The components of selling, general and administrative expenses are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Research and development expenses	126,535	127,094
Personnel expenses	43,511	46,829
Depreciation and amortization	26,345	59,825
Retirement benefit expenses	3,209	3,215
Other	51,421	44,045
Total	251,021	281,008

27. Other Income

The components of other income are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Gain on sales of property, plant and equipment	1,070	653
Subsidy income	—	423
Reversal of provision for contingent loss (Note)	6,385	2
Other	1,498	1,224
Total	8,953	2,302

(Note) A partial amount of provision on contingent loss has been reversed for the year ended December 31, 2018, mainly regarding the civil lawsuit in the United Stated related to the alleged patent infringement and trade secret violation etc. in which the Company‘s subsidiary has been named as a defendant, after reviewing the estimated amount following the revocation of compensation based on the judgement of the Court of First Instance in addition to reasons stated at the Appellate Court, which was conducted following the retrial order at the Court of First Instance.

28. Other Expenses

The components of other expenses are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Business structure improvement expenses (Note 1)	5,655	12,041
Impairment losses (Note 2)	1,526	2,256
Provision for loss on litigation (Note 3)	3,956	784
Compensation expenses (Note 4)	7,652	—
Loss on change of equity (Note 5)	1,273	—
Other	2,111	2,296
Total	22,173	17,377

(Note 1) The Group has reformed businesses and structures of production to strengthen its financial basis, and those related expenses are shown as business structure improvement expenses. The main items of business structure improvement expenses for the year ended December 31, 2018 were personnel expenses such as additional retirement benefits and impairment losses and equipment removal expenses of property, plant and equipment associated with consolidating the operating bases. The main items of business structure improvement expenses for the year ended December 31, 2019 were additional retirement benefits, etc. of the early retirement incentive program.

(Note 2) Impairment losses were mainly idle assets for the year ended December 31, 2018 and software for internal use in overseas subsidiary for the year ended December 31, 2019.

(Note 3) Provision was provided for compensation or litigation proceedings, etc.

(Note 4) Compensation expenses for the current fiscal year were temporary payments due to manufacturing contract revision between the Group and contract manufacturers

(Note 5) Following the partial transfer of the Group's shares of RENESAS EASTON Co., Ltd. on August 1, 2018, the Group excluded RENESAS EASTON Co., Ltd. from the scope of application of the equity method for the year ended December 31, 2018. Accordingly, the Group recognized loss for the year ended December 31, 2018 for loss on transfer of shares in addition to loss arising from the fair value evaluation of the Group's residual investment at the time of discontinuation of the equity-method.

29. Finance Income and Finance Costs

The components of finance income and costs are as follows.

(1) Finance income

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Interest income		
Financial assets measured at amortized cost	1,391	1,325
Valuation gain of investment trust		
Financial assets measured at fair value through profit or loss	—	548
Dividends received		
Equity financial assets measured at fair value through other comprehensive income	91	—
Financial assets measured at fair value through profit or loss	—	238
Foreign exchange gains	127	—
Other	—	75
Total	1,609	2,186

The components of dividends received from equity instruments measured at fair value through other comprehensive income are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Financial assets derecognized during the period	91	—
Financial assets held as of the closing date	—	—
Total	91	—

(2) Finance costs

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Interest expense		
Financial liabilities measured at amortized cost	2,131	7,484
Foreign exchange losses (Note)	—	1,269
Other	—	21
Total	2,131	8,774

(Note) Foreign exchange losses include losses on valuation of currency derivatives.

30. Other Comprehensive Income

Reclassification adjustments of other comprehensive income

Reclassification adjustments and tax effects of other comprehensive income by component are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Items that will not be reclassified to profit or loss:		
Remeasurements of defined benefit plans		
Amount incurred during the period	(5,883)	(3,991)
Tax effect	1,824	788
After tax effect	(4,059)	(3,203)
Equity financial assets measured at fair value through other comprehensive income		
Amount incurred during the period	(64)	(204)
Tax effect	10	27
After tax effect	(54)	(177)
Share of other comprehensive income of investments accounted for using the equity method		
Amount incurred during the period	(26)	—
Tax effect	—	—
After tax effect	(26)	—
Total of items that will not be reclassified to profit or loss	(4,139)	(3,380)
Items that may be reclassified subsequently to profit or loss:		
Exchange differences on translation of foreign operations		
Amount incurred during the period	(14,401)	(18,033)
Reclassification	—	—
Before tax effect	(14,401)	(18,033)
Tax effect	—	—
After tax effect	(14,401)	(18,033)
Cash flow hedges		
Amount incurred during the period	(14,318)	5,614
Before tax effect	(14,318)	5,614
Tax effect	—	—
After tax effect	(14,318)	5,614
Total of items that may be reclassified subsequently to profit or loss	(28,719)	(12,419)
Total other comprehensive income	(32,858)	(15,799)

31. Earnings Per Share

Basic earnings or loss per share attributable to owners of the parent and diluted earnings or loss per share are as follows.

(1) Basic earnings or loss per share

	The year ended December 31, 2018	The year ended December 31, 2019
Profit or loss attributable to owners of the parent used for the calculation of basic earnings per share (million yen)	50,989	(5,914)
Profit or loss from continuing operations (million yen)	50,989	(5,914)
Profit from discontinued operations (million yen)	—	—
Weighted average number of ordinary shares during the year (thousands of shares)	1,667,717	1,694,151
Basic earnings or loss per share (yen)	30.57	(3.49)
Continuing operations (yen)	30.57	(3.49)
Discontinued operations (yen)	—	—

(2) Diluted earnings or loss per share

	The year ended December 31, 2018	The year ended December 31, 2019
Profit or loss attributable to owners of the parent used for the calculation of basic earnings per share (million yen)	50,989	(5,914)
Adjustments on earnings (million yen)	—	—
Profit or loss used for the calculation of diluted earnings per share (million yen)	50,989	(5,914)
Profit or loss from continuing operations (million yen)	50,989	(5,914)
Profit from discontinued operations (million yen)	—	—
Weighted average number of ordinary shares during the year before dilution (thousands of shares)	1,667,717	1,694,151
Increase in ordinary shares due to warrants (thousands of shares)	4,043	—
Weighted average number of ordinary shares during the year after dilution (thousands of shares)	1,671,759	1,694,151
Diluted earnings or loss per share (yen)	30.50	(3.49)
Continuing operations (yen)	30.50	(3.49)
Discontinued operations (yen)	—	—

(Note) 1. The diluted loss per share for the fiscal year ended December 31, 2019 is the same amount as the basic loss per share due to the absence of residual equity with a dilutive effect.

2. For the fiscal year ended December 31, 2019, since the warrants the Company issues do not have a dilutive effect, these are not included in the calculation for diluted loss per share (yen).

32. Consolidated Statement of Cash Flows

(1) Changes in liabilities in financing activities

The components of liabilities in financing activities and their changes during the fiscal year are as follows.

(For the year ended December 31, 2018) (In millions of yen)

	As of December 31, 2017	Cash flows	Non-cash transactions		As of December 31, 2018
			Acquisition	Other	
Borrowings (non-current) (Note 1)	193,459	(46,529)	—	318	147,248
Borrowings (current)	35,000	10,000	—	—	45,000
Lease liabilities	2,626	(916)	1,052	—	2,762
Total	231,085	(37,445)	1,052	318	195,010

(For the year ended December 31, 2019)

(In millions of yen)

	As of December 31, 2018	Adjustment due to adoption of IFRS16	As of January 1, 2019	Cash flows	Non-cash transactions			As of December 31, 2019
					Acquisition	Increase due to business combination	Other (Note 2)	
Borrowings (non-current) (Note 1)	147,248	—	147,248	629,355	—	—	(4,856)	771,747
Borrowings (current)	45,000	—	45,000	(45,000)	—	—	—	—
Bonds	—	—	—	(65,409)	—	65,262	159	12
Lease liabilities	2,762	13,102	15,864	(5,726)	2,826	1,234	(43)	14,155
Total	195,010	13,102	208,112	513,220	2,826	66,496	(4,740)	785,914

(Note) 1. Current portion of long-term borrowings are included in borrowings (non-current).
2. Non-cash transactions for borrowings (non-current) includes the arrangement fees.

(2) Non-cash transactions

There is no significant non-cash transaction in the prior fiscal year and the current fiscal year.

The Group has applied IFRS16 for the fiscal year ended December 31, 2019. For the details of change in accounting policy and the right-of-use recognized when applying IFRS16, see "2. Basis for Preparation, (5) Change in accounting policies" and "Note 14. Leases".

(3) Principal assets and liabilities of a company that became a consolidated subsidiary due to acquisition of stock

(For the year ended December 31, 2019)

For details of the breakdown of assets and liabilities for IDT and its subsidiaries at time of its consolidation resulting from the acquisition of stock as well as the relationship between the acquisition price of stock and expenditures (net) for its acquisition, see "Note 7. Business Combinations".

33. Share-based Payments

(1) Overview of the share-based payment plan

The Company has adopted a share-based payment plan (hereafter "the stock option plan") as an incentive plan for directors (excluding outside directors), senior vice presidents and employees.

Under the stock option plan, warrants have been granted to eligible persons in accordance with the resolution of the Board of Directors of the Company based on the arrangement approved at the shareholders meeting of the Company. The exercise period of the stock options is set by an allotment contract, and if they are not exercised during the exercise period, the stock options will lapse. In addition, if an eligible person has left the Company before the vesting date, the options will also lapse. However, this does not apply to certain cases addressed in the warrants allotment contract, such as resignation due to the expiration of the term of office.

The stock option plan of the Company is accounted for as equity-settled share-based payments.

(2) Share-based payment plan

The share-based payment plan in effect during the current fiscal year is as follows.

	Category and number of grantees	Type of stock and number of shares	Grant date	Vesting conditions	Vesting period	Exercise period
Fiscal year 2016 Stock options No.1 No.2 No.3	Directors of the Company 2 Corporate officers and executive officers of the Company 10	Common stock 288,500 shares	August 1, 2016	The rights will vest in stages as follows. One third will vest on August 2, 2017 One third will vest on August 2, 2018 The remaining will vest on August 2, 2019	From August 1, 2016 to August 2, 2019	From August 2, 2016 to August 1, 2026
Fiscal year 2017 Stock options No.1 – 1 No.2 – 1	Directors of the Company 2 Corporate officers and executive officers of the Company 11 Employees of the Company 342 Directors of subsidiaries 20 Employees of subsidiaries 890	Common stock 3,549,500 shares	April 3, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From April 3, 2017 to April 4, 2020	From April 4, 2017 to April 3, 2027
Fiscal year 2017 Stock options No.1 – 2 No.2 – 2	Directors of the Company 2 Corporate officers and executive officers of the Company 11 Employees of the Company 78 Directors of subsidiaries 14 Employees of subsidiaries 59	Common stock 2,112,000 shares	April 3, 2017	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From April 3, 2017 to April 4, 2020	From April 4, 2017 to April 3, 2027
Fiscal year 2017 Stock options No.3	Employees of subsidiaries 7	Common stock 30,900 shares	May 11, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From May 11, 2017 to April 4, 2020	From May 12, 2017 to May 11, 2027

	Category and number of grantees	Type of stock and number of shares	Grant date	Vesting conditions	Vesting period	Exercise period
Fiscal year 2017 Stock options No.4	Employees of subsidiaries 13	Common stock 52,200 shares	July 12, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From July 12, 2017 to April 4, 2020	From July 13, 2017 to July 12, 2027
Fiscal year 2017 Stock options No.5 No.6	Employees of subsidiaries 20	Common stock 98,000 shares	September 14, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From September 14, 2017 to April 4, 2020	From September 15, 2017 to September 14, 2027
Fiscal year 2017 Stock options No.7	Employees of subsidiaries 16	Common stock 94,000 shares	October 12, 2017	The rights will vest in stages as follows One third will vest on April 4, 2018 One third will vest on April 4, 2019 The remaining will vest on April 4, 2020	From October 12, 2017 to April 4, 2020	From October 13, 2017 to October 12, 2027
Fiscal year 2017 Stock options No.8	Employees of subsidiaries 26	Common stock 117,300 shares	January 15, 2018	The rights will vest in stages as follows Certain amount will vest on April 4, 2018 Certain amount will vest on April 4, 2019 Certain amount will vest on April 4, 2020 The remaining will vest on April 4, 2021	From January 15, 2018 to April 4, 2021	From January 16, 2018 to January 15, 2028
Fiscal year 2018 Stock options No.1 – 1 No.2 – 1	Directors of the Company 3 Corporate officers and executive officers of the Company 10 Employees of the Company 472 Directors of subsidiaries 18 Employees of subsidiaries 743	Common stock 3,607,200 shares	April 2, 2018	The rights will vest in stages as follows One third will vest on April 3, 2019 One third will vest on April 3, 2020 The remaining will vest on April 3, 2021	From April 2, 2018 to April 3, 2021	From April 3, 2018 to April 2, 2028

	Category and number of grantees	Type of stock and number of shares	Grant date	Vesting conditions	Vesting period	Exercise period
Fiscal year 2018 Stock options No.1 – 2 No.2 – 2	Directors of the Company 3 Corporate officers and executive officers of the Company 10 Employees of the Company 95 Directors of subsidiaries 13 Employees of subsidiaries 47	Common stock 2,047,200 shares	April 2, 2018	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From April 2, 2018 to April 3, 2021	From April 3, 2018 to April 2, 2028
Fiscal year 2018 Stock options No.3 No.4	Employees of the Company 257 Directors of subsidiaries 1 Employees of subsidiaries 181	Common stock 534,600 shares	July 31, 2018	The rights will vest in stages as follows One third will vest on April 3, 2019 One third will vest on April 3, 2020 The remaining will vest on April 3, 2021	From July 31, 2018 to April 3, 2021	From August 1, 2018 to July 31, 2028
Fiscal year 2018 Stock options No.5	Employees of subsidiaries 22	Common stock 182,700 shares	October 31, 2018	The rights will vest in stages as follows Certain amount will vest on April 3, 2019 Certain amount will vest on April 3, 2020 Certain amount will vest on April 3, 2021 The remaining will vest on April 3, 2022	From October 31, 2018 to April 3, 2022	From November 1, 2018 to October 31, 2028
Fiscal year 2019 Stock options No.1 No.2 No.3	Corporate officers and executive officers of the Company 1 Directors of subsidiaries 1 Corporate officers and executive officers of subsidiaries 3 Employees of subsidiaries 1,337	Common stock 57,043,500 shares	April 9, 2019	According to completion of the acquisitions with IDT, the existing stock options for IDT allocated to directors of IDT and its subsidiaries, corporate officers and executive officers of subsidiaries, and employees of subsidiaries are converted into the stock options for the Company and issued. The rights are based on the vesting periods for the stock option originally scheduled in IDT.	From April 9, 2019 to March 15, 2023	From April 9, 2019 to April 8, 2029

	Category and number of grantees	Type of stock and number of shares	Grant date	Vesting conditions	Vesting period	Exercise period
Fiscal year 2019 Stock options No.4 – 1 No.5 – 1	Corporate officers and executive officers of the Company 1 Employees of the Company 1 Employees of subsidiaries 32	Common stock 659,800 shares	May 31, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From May 31, 2019 to April 1, 2022	From June 1, 2019 to May 31, 2029
Fiscal year 2019 Stock options No.4 – 2 No.5 – 2	Corporate officers and executive officers of the Company 1 Employees of the Company 1	Common stock 364,300 shares	May 31, 2019	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From May 31, 2019 to April 1, 2022	From June 1, 2019 to May 31, 2029
Fiscal year 2019 Stock options No.6 – 1 No.7 – 1	Employees of the Company 486 Directors of subsidiaries 15 Employees of subsidiaries 1,875	Common stock 16,222,700 shares	July 25, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From July 25, 2019 to April 1, 2022	From July 26, 2019 to July 25, 2029
Fiscal year 2019 Stock options No.6 – 2 No.7 – 2	Employees of the Company 90 Directors of subsidiaries 10 Employees of subsidiaries 46	Common stock 3,203,800 shares	July 25, 2019	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From July 25, 2019 to April 1, 2022	From July 26, 2019 to July 25, 2029

	Category and number of grantees	Type of stock and number of shares	Grant date	Vesting conditions	Vesting period	Exercise period
Fiscal year 2019 Stock options No.8 – 1 No.9 – 1	Directors of the Company 2 Corporate officers and executive officers of the Company 12 Employees of the Company 2	Common stock 985,900 shares	August 23, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From August 23, 2019 to April 1, 2022	From August 24, 2019 to August 23, 2029
Fiscal year 2019 Stock options No.8 – 2 No.9 – 2	Directors of the Company 2 Corporate officers and executive officers of the Company 12	Common stock 1,963,800 shares	August 23, 2019	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From August 23, 2019 to April 1, 2022	From August 24, 2019 to August 23, 2029
Fiscal year 2019 Stock options No.10	Employees of subsidiaries 441	Common stock 351,600 shares	September 20, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From September 20, 2019 to April 1, 2022	From September 21, 2019 to September 20, 2029
Fiscal year 2019 Stock options No.11 – 1 No.12 – 1	Corporate officers and executive officers of the Company 1 Employees of the Company 122 Employees of subsidiaries 123	Common stock 887,700 shares	October 31, 2019	The rights will vest in stages as follows Certain amount will vest on April 1, 2020 Certain amount will vest on April 1, 2021 Certain amount will vest on April 1, 2022 The remaining will vest on April 1, 2023	From October 31, 2019 to April 1, 2023	From November 1, 2019 to October 31, 2029

	Category and number of grantees	Type of stock and number of shares	Grant date	Vesting conditions	Vesting period	Exercise period
Fiscal year 2019 Stock options No.11 – 2 No.12 – 2	Corporate officers and executive officers of the Company 1 Employees of subsidiaries 1	Common stock 73,800 shares	October 31, 2019	The Company sets the upper limit number of shares expected to vest by multiplying the number of allocated stock subscription rights with the rate calculated by comparing total shareholder return fluctuation rate of the Company and companies that are the components of PHLX Semiconductor Sector Index and Tokyo Stock Price Index.	From October 31, 2019 to April 1, 2023	From November 1, 2019 to October 31, 2029
Fiscal year 2019 Stock options No.13	Employees of subsidiaries 15	Common stock 204,800 shares	December 25, 2019	The rights will vest in stages as follows One third will vest on April 1, 2020 One third will vest on April 1, 2021 The remaining will vest on April 1, 2022	From December 25, 2019 to April 1, 2022	From December 26, 2019 to December 25, 2029

(Note) 1. Working until when the stock is vested after the grant date is vesting conditions. However, this does not apply to certain cases such as mandatory retirement, resignation due to the expiration of the term of office or the other justifiable reasons.
2. Grantees cannot execute those options during the time from the day after the grant date until when the stock is vested. Also, the option will be forfeited if the target retires or resigns from the Company or subsidiary by the vesting date. However, if allowed at the Stock Acquisition Rights Allocation Agreement, those options may be exercised. For example, if retirement or resignation due to the expiration of terms of office allowed at Stock Acquisition Rights Allocation Agreement, the said person may execute the said stock options starting on the day following said loss of eligibility until 13 months after.
3. If grantees forfeit their stock acquisition rights, they may not exercise their stock options.

(3) Number and weighted average exercise price of stock options

Changes of the number and the weighted average exercise price of stock options granted in the prior fiscal year and the current fiscal year are as follows. The number of stock options is stated by converting them to the number of shares.

	The year ended December 31, 2018		The year ended December 31, 2019	
	Number of options (shares)	Weighted average exercise price (yen)	Number of options (shares)	Weighted average exercise price (yen)
Beginning balance of unexercised options	6,037,300	1	10,854,400	1
Granted	6,489,000	1	81,961,700	1
Exercised	1,190,900	1	41,891,400	1
Forfeited	468,900	1	3,357,800	1
Expired	12,100	1	109,500	1
Ending balance of unexercised options	10,854,400	1	47,457,400	1
Ending balance of exercisable options	428,800	1	2,486,800	1

(Note) 1. For the stock options exercised during the period, the weight average share price as of the exercise date was 887 yen for the fiscal year ended December 31, 2018 and 597 yen for the fiscal year ended December 31, 2019.
2. Remaining weighted average contractual life outstanding at the end of the prior fiscal year and the current fiscal year was 4 years, respectively.

(4) Fair value of stock options granted and estimation method of fair value

The valuation techniques used for the stock options granted for the fiscal year ended December 31, 2018 and the fiscal year ended December 31, 2019 are the Binomial model, and the major basic assumptions and estimation method are as follows.

Date of grant	Fair value per share at the grant date (yen)	Share price on date of grant (yen)	Exercise price (yen)	Expected volatility (Note 1)	Expected holding period (Note 2)	Expected dividend (Note 3)	Risk-free interest rate (Note 4)
January 2018	1,320	1,321	1	48.191%	5 years	No dividend	(0.081%)
April 2018	1,092 425 (Note 5)	1,093	1	47.500%	5 years	No dividend	(0.106%)
July 2018	995	996	1	39.782%	5 years	No dividend	(0.100%)
October 2018	597	598	1	39.794%	5 years	No dividend	(0.087%)
April 2019	511	512	1	46.525%	5 years	No dividend	(0.202%)
May 2019	494 294 (Note 5)	495	1	43.038%	5 years	No dividend	(0.203%)
July 2019	638 381 (Note 5)	639	1	43.200%	5 years	No dividend	(0.235%)
August 2019	629 399 (Note 5)	630	1	42.800%	5 years	No dividend	(0.323%)
September 2019	660	661	1	42.469%	5 years	No dividend	(0.346%)
October 2019	739 469 (Note 5)	740	1	42.188%	5 years	No dividend	(0.269%)
December 2019	753	754	1	42.194%	5 years	No dividend	(0.116%)

(Note) 1. The expected volatility is calculated using the actual share prices during the expected holding period from the grant date.
2. The expected holding period is based on the number of years from the grant date to the last day of the principle exercise period.
3. The expected dividend is calculated based on the actual annual dividend for the year.
4. The risk-free interest rate is the yield on Japanese government bonds for the period that corresponds to the remaining life of the option.
5. For the stock options whose vesting condition is the stock price requirement, the actual rates of granted stocks are reflected on the fair value based on the results of comparing the fluctuation rate of the Company's stock with that of stock indexes over a certain period.

(5) Share-based payment expenses

Share-based payment expenses included in the consolidated statement of profit or loss totaled 461 million yen in "Cost of sales" and 3,830 million yen in "Selling, general and administrative expenses" in the previous fiscal year, and 827 million yen in "Cost of sales" and 10,927 million yen in "Selling, general and administrative expenses" in the current fiscal year.

34. Financial Instruments

(1) Capital management

The Group aims to achieve sustainable growth and maximize its corporate value. Investments of surplus funds are limited to short-term deposits and financial assets with a high level of safety. Regarding financing sources, the Group mainly uses borrowings from banks. The Group mainly uses derivative financial instruments to manage fluctuations in foreign currency exchange rates, and the Group's policies prohibit holding or issuing derivative financial instruments for speculative transactions. Items subject to management are net interest-bearing debt obtained by deducting cash and cash equivalents from interest-bearing debt and equity. Their balances and the major indicators that the Group uses for its capital management are as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Interest-bearing debt	195,010	785,914
Less: Cash and cash equivalents	(188,820)	(146,468)
Net interest-bearing debt	6,190	639,446
Equity	598,100	620,666
Equity ratio (%)	56.7	37.2

Equity: Total equity attributable to owners of the parent
Equity ratio: Equity/Total liabilities and equity

(2) Basic policies for financial risk management

The Group is exposed to financial risks (credit risk, liquidity risk and market risk) in the process of executing its business activities. Accordingly, the Group regularly monitors the financial risks based on internal management regulations, etc. and takes measures to avoid or reduce the risks as required.
The Group does not engage in derivative transactions for speculative purposes.

a. Credit risk

(a) Credit risk management

Notes and trade receivables are exposed to the credit risk of customers. Conforming to the internal rules for the management of receivables, the Group regularly monitors major customers' credit and manages the due dates of collection and the balance for each customer. Other receivables are exposed to the credit risk of customers, but most of them are settled in the short term. Short-term investments are financial assets invested on a short-time basis, and the Group transacts with highly creditworthy financial institutions. Trade receivables, etc. are regarded as non-performing if all or part of them cannot be collected or if collection is deemed extremely difficult. The Group does not have any exposure to the significant credit risk of certain customers, and there is no excessive concentration of credit risk that requires special management.

The largest exposure to credit risk at the end of the reporting period is the carrying amount of financial assets after impairment, but there is no track record of recognizing a significant credit loss in previous years.

Regarding debt guarantees, the balance of debt guarantees presented in "Note 37. Commitments and Contingencies" is the largest exposure of the Group to credit risk.

(b) Analysis of changes in loss allowance

The changes in the loss allowance are as follows.

(In millions of yen)

	The year ended December 31, 2018				The year ended December 31, 2019			
	Loss allowance for financial instruments other than trade receivables (12-month expected credit losses)	Loss allowance for trade receivables (lifetime expected credit losses)	Loss allowance for financial instruments whose credit risk has increased significantly (lifetime expected credit losses)	Loss allowance for financial instruments whose credit is impaired (lifetime expected credit losses)	Loss allowance for financial instruments other than trade receivables (12-month expected credit losses)	Loss allowance for trade receivables (lifetime expected credit losses)	Loss allowance for financial instruments whose credit risk has increased significantly (lifetime expected credit losses)	Loss allowance for financial instruments whose credit is impaired (lifetime expected credit losses)
Beginning balance	—	65	15	—	—	48	—	—
Increases	—	76	—	—	—	103	—	—
Decreases due to reversal	—	(89)	—	—	—	(55)	—	—
Other	—	(4)	(15)	—	—	(1)	—	—
Ending balance	—	48	—	—	—	95	—	—

(Note) Acquisition by business combination is included in "Increases".

(c) Carrying amount of financial instruments for the loss allowance

The carrying amount (before the loss allowance) of financial instruments for the loss allowance on the transition date and as of each fiscal year end is as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Financial instruments other than trade receivables (12-month expected credit losses)	3,141	3,081
Trade receivables (lifetime expected credit losses)	76,356	81,473
Financial instruments whose credit risk has increased significantly (lifetime expected credit losses)	—	—
Financial instruments whose credit is impaired (lifetime expected credit losses)	—	—

(d) Analysis of credit risk

The aging analysis of trade receivables on the transition date and as of each fiscal year end is as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Before due date	71,853	76,198
Up to 30 days past due	3,996	4,579
Over 30 days past due and up to 90 days past due	504	696
Over 90 days past due	3	—
Total	76,356	81,473

For trade receivables, the Group’s major counterparties consist of specific distributors, etc. with high credit ratings and there is no materiality in the balance of loss allowance based on expected loss rate.

For financial instruments other than trade receivables, there is no credit risk that is concentrated around credit ratings.

b. Liquidity risk

The Group is exposed to liquidity risk whereby the performance of payment obligations could become difficult. To limit its exposure to liquidity risk, however, the Group works to maintain fund management through the optimization of capital efficiency due to the efficient management of working capital and the concentrated management of funds by the Company. The Group also manages the liquidity risk by appropriately maintaining liquidity on hand through the timely preparation and updating of the financing plan and taking the external financial environment into account.

The balance of financial liabilities by due date is as follows.

As of December 31, 2018

(In millions of yen)

	Carrying amount	Contractual cash flows	Due within one year	Due after one year but within two years	Due after two years but within three years	Due after three years but within four years	Due after four years but within five years	Due after five years
Non-derivative financial liabilities								
Trade and other payables	120,636	120,636	116,233	4,388	15	—	—	—
Bonds and Borrowings	192,248	196,449	46,586	1,213	148,650	—	—	—
Other	3,062	3,157	765	753	304	287	284	764
Derivative liabilities	14,318	14,318	14,318	—	—	—	—	—
Total	330,264	334,560	177,902	6,354	148,969	287	284	764

As of December 31, 2019

(In millions of yen)

	Carrying amount	Contractual cash flows	Due within one year	Due after one year but within two years	Due after two years but within three years	Due after three years but within four years	Due after four years but within five years	Due after five years
Non-derivative financial liabilities								
Trade and other payables	101,032	101,032	100,187	584	261	—	—	—
Bonds and Borrowings	771,759	797,931	99,265	98,474	97,712	96,941	405,539	—
Lease liabilities	14,155	15,840	4,486	2,620	2,083	1,816	1,484	3,351
Other	300	300	—	300	—	—	—	—
Total	887,246	915,103	203,938	101,978	100,056	98,757	407,023	3,351

c. Market risk

(a) Foreign currency exchange risk

(i) Foreign currency exchange risk management

Foreign currency receivables and obligations arising from the global business development of the Group are exposed to the risk of foreign exchange rate fluctuations. To reduce the risk of foreign exchange rate fluctuations, the Group uses forward exchange contracts, currency options and currency swaps.

(ii) Net foreign exchange risk exposure

The Group's exposure to the risk of foreign exchange rate fluctuations (net amount) is as follows. This excludes derivative transactions and the amount entered into to hedge foreign exchange rate fluctuation risk using foreign currency deposits.

(In millions of yen)

Currency	The year ended December 31, 2018	The year ended December 31, 2019
US dollar	114,725	37,452
Euro	15,842	13,976

(iii) Sensitivity analysis of foreign exchange rates

Based on the assumption that all other variables are constant for foreign currency financial instruments held by the Group in the previous fiscal year and the current fiscal year, the amount of the impact of the 1.0% appreciation of the yen against the US dollar and the euro on profit before tax in the consolidated statement of profit or loss is as follows.

(In millions of yen)

Currency	The year ended December 31, 2018	The year ended December 31, 2019
US dollar	(1,147)	(375)
Euro	(158)	(140)

(b) Interest rate risk

Although the Group raises funds through borrowings for the purpose of securing funds for long-term working capital and the promotion of growth strategies, the Group is exposed to the risk of interest rate fluctuations because some borrowings are made at floating interest rates. To reduce the risk of changes in the interest paid on borrowings, the Group uses interest rate swaps as required. Accordingly, the Group has decided that the impact of the risk of interest rate fluctuations on the Company is limited and insignificant, and does not conduct a sensitivity analysis for interest rate risk.

(c) Stock price risk

The Group has adopted an incentive plan for its employees for the purpose of securing excellent human resources, particularly at subsidiaries. To operate the incentive plan, the Group holds shares and other financial instruments for the long term and is exposed to the risk of changes in their market prices. Please note that, following the introduction of a stock option plan, the incentive plan was abolished and there was no new issuance.

The Group does not conduct a sensitivity analysis for the risk of changes in share prices since the impact of changes in share prices are immaterial.

(3) Fair value of financial instruments

a. Calculation method of fair value

The calculation method of the fair value of financial instruments is as follows.

(a) Cash and cash equivalents, and trade and other receivables

The fair value of these instruments approximates their carrying amount due to short term maturities.

(b) Trade and other payables

For trade and other payables that will mature within a relatively short amount of time, the fair value approximates the carrying amount. The fair value of trade and other payables that will not mature in a short amount of time is calculated by the present value that is discounted by an interest rate assumed for the case where a similar borrowing is newly made and classified as Level 2.

(c) Securities

If the market price of a security is available in an active market, the securities are measured using this market price and classified as Level 1. If the market price is not available, the fair value is measured mainly by a method based on net assets (method of calculating by making adjustments to the market value as required based on the net assets of the entity that issues shares), etc. and classified as Level 3.

(d) Long-term borrowings and lease liabilities

The fair value of long-term borrowings and lease liabilities is calculated at the present value that is discounted using an interest rate assumed for the case where a similar borrowing is newly made and classified as Level 2.

(e) Derivative transactions

Forward exchange contracts are calculated based on forward exchange rates and classified as Level 2.

(f) Bonds

The fair value of bonds acquired due to business combination is calculated by referring to a market price and classified as Level 2.

(g) Other financial assets and liabilities

Time deposits with maturities of more than three months, long-term accounts receivable, security deposits and guarantee deposits received that are measured at amortized cost are classified as Level 2. Because their fair value approximates their carrying amount, they are omitted from the following table.

b. Classification of financial instruments measured at fair value by levels

In the fair value hierarchy, financial instruments are classified from Level 1 to Level 3 as follows.

Level 1: Fair value measured using unadjusted quoted prices in the active markets

Level 2: Fair value other than quoted prices include within Level 1 that are observable, either directly or indirectly

Level 3: Fair value calculated by using a valuation technique including inputs that are not based on observable market data

Transfers between the levels in the fair value hierarchy are recognized on the assumption that the transfers occur at the end of each reporting period. There is no transfer between levels.

(a) Financial instruments measured at amortized cost

The carrying amount and the fair value of financial instruments measured at amortized cost are as follows. Financial instruments measured at fair value and financial instruments whose carrying amount closely approximates fair value are not included in the table below.

As of December 31, 2018

(In millions of yen)

	Carrying amount	Fair value			
		Level 1	Level 2	Level 3	Total
Financial liabilities					
Borrowings	192,248	—	192,554	—	192,554
Bonds	—	—	—	—	—
Other payables	41,682	—	41,626	—	41,626
Lease liabilities	2,762	—	2,767	—	2,767
Total	236,692	—	236,947	—	236,947

As of December 31, 2019

(In millions of yen)

	Carrying amount	Fair value			
		Level 1	Level 2	Level 3	Total
Financial liabilities					
Borrowings	771,747	—	776,736	—	776,736
Bonds	12	—	12	—	12
Other payables	16,974	—	16,934	—	16,934
Total	788,733	—	793,682	—	793,682

(b) Financial instruments measured at fair value

The components of financial assets and financial liabilities measured at fair value on a recurring basis that are classified as each level of the fair value hierarchy are as follows.

As of December 31, 2018

(In millions of yen)

	Level 1	Level 2	Level 3	Total
Financial assets				
Equity instruments measured at fair value through other comprehensive income				
Listed securities	2,017	—	—	2,017
Unlisted securities	—	—	1,245	1,245
Total	2,017	—	1,245	3,262
Financial liabilities				
Financial liabilities measured at fair value through profit or loss				
Derivative liabilities	—	14,318	—	14,318
Total	—	14,318	—	14,318

As of December 31, 2019

(In millions of yen)

	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss				
Listed securities	3,967	—	—	3,967
Unlisted securities	—	—	1,258	1,258
Financial assets measured at fair value through other comprehensive income				
Unlisted securities	—	—	2,668	2,668
Total	3,967	—	3,926	7,893

c. Changes in financial assets that are classified as Level 3 are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Beginning balance	1,463	1,245
Total gains or losses in the period	251	(21)
Profit or loss (Note 1)	—	119
Other comprehensive income (Note 2)	251	(140)
Purchases	—	—
Sales	(5)	(60)
Settlement	(464)	—
Acquisition due to business combination	—	2,816
Other	—	(54)
Ending balance	1,245	3,926

Changes in financial liabilities that are classified as Level 3 are as follows.

(In millions of yen)

	The year ended December 31, 2018	The year ended December 31, 2019
Beginning balance	—	—
Total gains or losses in the period	—	(67)
Profit or loss (Note 1)	—	(67)
Other comprehensive income	—	—
Purchases	—	—
Sales	—	—
Settlement	—	(222)
Acquisition due to business combination	—	294
Other	—	(5)
Ending balance	—	—

(Note) 1. Total gains or losses in the period are for financial assets and liabilities measured at fair value through profit or loss and included in finance income and costs in the consolidated statement of profit or loss.

2. Total gains or losses in the period are all for equity instruments measured at fair value through other comprehensive income at the end of the reporting period and presented in “Equity instruments measured at fair value through other comprehensive income” in the consolidated statement of comprehensive income.

3. Financial instruments that are classified as Level 3 consist of unlisted securities. The fair value of unlisted securities is measured by the responsible department in the Group according to the Group

accounting policies, etc., using the immediately preceding available figure in each quarter. The measurement results of the fair value are reviewed and approved by an appropriate authorized person. For the financial instruments classified as Level 3, the Company does not expect that there will be any significant change in the fair value amount even if the assumptions used are changed within a reasonable range.

(4) Derivative transactions and hedging activities

a. Overview of hedges

The Group uses forward exchange contracts, currency options and currency swaps for the purpose of hedging transactions against the risk of foreign exchange rate fluctuations mainly, in foreign currency cash flows. Hedge accounting is applied to those transactions that meet the requirements for hedge accounting. Even if the requirements for hedge accounting are not met, the Group uses derivative transactions if they are economically reasonable. Changes in the fair value of the derivative transactions are recognized in profit or loss. The Group has also set a policy of not engaging in derivative transactions for speculative purposes.

Cash flow hedges

Cash flow hedges are hedges to avoid the risk of changes in future cash flows, and changes in the fair value of derivative transactions that are designated as cash flow hedges are recognized in other comprehensive income. The amount that is recognized in accumulated other comprehensive income is reclassified to profit or loss at the time when the hedged transactions affect profit or loss. If the hedged items give rise to the recognition of non-financial assets or non-financial liabilities, the amount that is recognized in other comprehensive income is reclassified as an adjustment to the initial carrying amount of non-financial assets or non-financial liabilities. Derivatives that are designated as cash flow hedges include forward exchange contracts, currency options and currency swaps to hedge the risk of changes in cash flows due to changes in the foreign exchange rates for foreign currency transactions.

In the previous fiscal year and the current fiscal year, no amount was recognized in profit or loss for the hedge ineffectiveness portion and the portion that was excluded from the assessment of hedge effectiveness.

b. Information on items that are designated as hedging instruments

The impact of hedging instruments that are designated as hedges on the consolidated statement of financial position is as follows. Derivative assets and liabilities are included in “Other financial assets” and “Other financial liabilities,” respectively, in the consolidated statement of financial position.

As of December 31, 2018

(In millions of yen)

	Contract amount, etc.	Carrying amount of hedging instruments (fair value)		Changes in the fair value used as a base to recognize the ineffective portion of the hedge
		Assets	Liabilities	
Cash flow hedges				
Foreign currency exchange risk				
Currency options	579,056	—	12,970	—
Currency swaps	112,161	—	1,348	—

As of December 31, 2019

Not applicable

c. Information on items designated as hedged items

The amount of the impact of hedged items that are designated as hedges on the consolidated statement of financial position is as follows.

As of December 31, 2018

(In millions of yen)

	Changes in the fair value used as a base to recognize the ineffective portion of the hedge	Cash flow hedge reserve for ongoing hedges	Cash flow hedge reserve for the cancellation of hedge accounting
Cash flow hedges			
Foreign currency exchange risk			
Planned purchases	—	(14,318)	—

As of December 31, 2019
Not applicable

d. Impact of the application of hedge accounting on the consolidated statement of profit and loss and the consolidated statement of comprehensive income

The impact of hedging instruments that are designated as cash flow hedges on the consolidated statement of profit and loss and the consolidated statement of comprehensive income is as follows.

(In millions of yen)

	Changes in the value of hedging instruments recognized in other comprehensive income (Note)	Ineffective portion recognized in profit or loss	Amount after basis adjustment to cash flow hedges (Note)
As of December 31, 2018			
Cash flow hedges			
Foreign currency exchange risk			
Currency options	(12,970)	—	—
Currency swaps	(1,348)	—	—
As of December 31, 2019			
Cash flow hedges			
Foreign currency exchange risk			
Currency options	—	—	—
Currency swaps	—	—	—

(Note) Amount before tax effect.

e. Fair value of derivatives to which hedge accounting is not applied

The fair value and contract amount, etc. of derivatives to which hedge accounting is not applied are as follows.

As of December 31, 2018 and December 31, 2019
Not applicable.

(5) Transfer of financial assets

Accelerating from restructuring to growth stage, the Group provides diversified financing to achieve these growth strategies and liquidates certain trade receivables by transferring receivables etc.

The expenses arising from transfer of trade receivables derecognized in their entirety were 11 million yen in the prior fiscal year and 54 million yen in the current fiscal year.

35. Transactions with Related Parties

(1) Transactions with related parties

Innovation Network Corporation of Japan, which was a principal shareholder of the Group, was established in July 2009 with the Japanese government as the principal shareholder, and the total amount of investments by the Japanese government accounts for 95% or more of the capital of Innovation Network Corporation of Japan . As a result, the Japanese government and the government-related entities have become related parties of the Group.

In addition, Innovation Network Corporation of Japan conducted a business divestiture in September 21, 2018 and newly created INCJ, Ltd.. INCJ, Ltd. succeeded to all of the Group's shares of Innovation Network Corporation of Japan and became a principal shareholder of the Group.

Between the Group and these related parties, there are neither significant transactions individually nor significant transactions on aggregate although not significant individually.

Furthermore, transactions with INCJ and other related parties are not applicable.

(2) Compensation to key management

Compensation paid to key management personnel is as follows.

(In millions of yen)

Category	The year ended December 31, 2018	The year ended December 31, 2019
Remuneration and bonuses	317	516
Share-based payments	78	91
Total	395	607

(Note) The exercise price, etc. of share-based payments is as stated in "Note 33. Share-based Payments."

36. Major Subsidiaries

All subsidiaries are included in the scope of consolidation for our consolidated financial statements.

Major subsidiaries as of December 31, 2019 are as follows.

Company	Location	Descriptions of Principal Businesses	Percentage Ownership and Voting Interest (%) (Note 1)	
			The year ended December 31, 2018	The year ended December 31, 2019
Renesas Semiconductor Manufacturing Co., Ltd.	Hitachinaka, Ibaraki	Manufacturing and Engineering Service Companies	100.0	100.0
Renesas Electronics (China) Co., Ltd.	Beijing, China	Sales Companies	100.0	100.0
Renesas Electronics Hong Kong Limited	Hong Kong, China	Sales Companies	100.0	100.0
Renesas Electronics America Inc. (Note 6)	California, U.S.A.	Design, Applications, Manufacturing and Sales Companies	100.0	100.0
Renesas Electronics Europe Limited (England) (Note 4)	Buckinghamshire, UK	Design, Applications and Sales Companies	100.0	100.0
Renesas Electronics Europe GmbH (Germany) (Note 4)	Dusseldorf, Germany	Design, Applications and Sales Companies	100.0 (100.0) (Note 2)	100.0
Renesas Semiconductor (Beijing) Co., Ltd.	Beijing, China	Manufacturing and Engineering Service Companies	100.0	100.0
Renesas Semiconductor (Suzhou) Co., Ltd.	Suzhou, China	Manufacturing and Engineering Service Companies	100.0 (6.33) (Note 2)	100.0 (6.33) (Note 2)
Renesas Semiconductor (Malaysia) Sdn. Bhd.	Penang, Malaysia	Manufacturing and Engineering Service Companies	90.0	90.0
Renesas International Operations Sdn. Bhd.	Kuala Lumpur, Malaysia	Business Corporations and Others	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)
Intersil Luxembourg S.a.r.l.	Esch-sur-Alzette Luxembourg	Business Corporations and Others	100.0 (100.0) (Note 2)	100.0 (100.0) (Note 2)
IDT (Note 5) (Note 6)	California, U.S.A.	Development, Manufacturing and Sale of analog integrated circuit	—	100.0
IDT Singapore Pte. Ltd.	Singapore	Sales Companies	—	100.0 (100.0) (Note 2)
IDT Canada, Inc.	Ontario, Canada	Applications and Sales Companies	—	100.0 (100.0) (Note 2)

Company	Location	Descriptions of Principal Businesses	Percentage Ownership and Voting Interest (%) (Note 1)	
			The year ended December 31, 2018	The year ended December 31, 2019
Integrated Device Technology Malaysia SDN.BHD.	Penang, Malaysia	Applications, Manufacturing and Sales Companies	—	100.0 (100.0) (Note 2)
IDT Europe GmbH	Dresden, Germany	Applications, Manufacturing and Sales Companies	—	100.0 (100.0) (Note 2)
IDT Bermuda Ltd.	Bermuda	Business Corporations and Others	—	100.0 (100.0) (Note 2)
GigPeak, Inc.	California, U.S.A.	Business Corporations and Others	—	100.0 (100.0) (Note 2)

(Note) 1. Percentage ownership and voting interest are rounded down to the second decimal point.
2. Numbers in parentheses represent indirect voting rights.
3. On January 1, 2019 the Company merged with Renesas Semiconductor Package & Test Solutions Co., Ltd through an absorption-type merger method.
4. On January 1, 2019 the Company acquired all outstanding shares in Renesas Electronics Europe GmbH, and Renesas Electronics Europe GmbH became a wholly owned subsidiary of the Company. wholly-owned subsidiary of Renesas Renesas Electronics Europe GmbH
5. The Company acquired IDT, a leading supplier of analog mixed-signal products on March 30, 2020 and IDT became a wholly owned subsidiary of the Company.
6. On January 1, 2020 IDT merged with Renesas America in an absorption-type merger and changed the trade name to Renesas America.

There are no subsidiaries with significant non-controlling interests.

37. Commitments and Contingencies

(1) Commitments for the acquisition of assets

Commitments for the acquisition of assets are as follows.

(In millions of yen)

Name	As of December 31, 2018	As of December 31, 2019
Property, plant and equipment	9,271	3,608
Intangible assets	789	533
Total	10,060	4,141

(2) Loan commitments

The Company has entered into a contract for setting a commitment line with its main banks for the purpose of securing long-term working capital, and the balance of unused loans is as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Total amount of commitment lines	50,000	50,000
Balance of used loans	45,000	—
Balance of unused loans	5,000	50,000

(3) Debt guarantees

The Group provides debt guarantees against bank loans, etc. of its employees and third parties as follows.

(In millions of yen)

	As of December 31, 2018	As of December 31, 2019
Guarantees of employees' obligations	65	45
Total	65	45

(Guarantees of employees' obligations)

The Group provides guarantees for the housing loans of employees as part of its welfare program. If an employee cannot repay a housing loan covered by a debt guarantee, the Group must assume the obligation. These debt guarantees are secured by the houses of the employees.

(4) Others

As the Group conducts business worldwide, it is possible that the Group may become a party to lawsuits, investigation by regulatory authorities and other legal proceedings in various countries.

Though it is difficult to predict the outcome of the legal proceedings to which the Group is presently a party or to which it may become a party in future, the resolution of such proceedings may require considerable time and expense, and it is possible that the Group may be required to pay compensation for damages, possibly resulting in significant adverse effects to the business, performance, financial condition, cash flow, reputation and creditability of the Group.

(Civil lawsuit related to the alleged patent infringement and trade secret violation)

The Company's subsidiary has been named as a defendant in a civil lawsuit in the United States related to the alleged patent infringement and trade secret violation.

The Company's subsidiary has been named as a defendant in a lawsuit filed in November 2008 in the United States District Court for the Eastern District of Texas (hereafter "the Court of First Instance"). The Court of First Instance entered a final judgment in June 2016 against us in the amount of 77.3 million U.S. dollars, however the Company's subsidiary immediately filed a notice of appeal at the Court of Appeals for the Federal Circuit (hereafter "the Court of Second Instance"). In July 2018, the Court of Second Instance rejected the judgement of the Court of First Instance for payment of compensation and conducted the retrial order at the Court of First Instance.

(Civil lawsuit related to the alleged violations of the competition law)

The Group has been named in Canada and the United Kingdom as a defendant in a civil lawsuit related to possible violations of competition law involving smartcard chips brought by purchasers of such products.

The civil lawsuit in Canada was brought in July 2013 in Supreme Court of British Columbia, but the lawsuit was withdrawn by the plaintiff in December 2019 without any progress. There are two civil lawsuits in the United Kingdom. One The one case was brought in December 2014 in the Senior Courts of England and Wales and the proceedings were ordered stayed by the request of the party after that. The other case was brought in July 2019 in Supreme Court of British Columbia by the other purchasers of such products and has not reached settlement either.

(Indemnification claim related to environmental pollution)

The Group's subsidiary in Taiwan may be subject to requests for restitution for environmental pollution associated with a factory in Taiwan owned by the subsidiary's predecessor company.

Since June, 2004, the Group's subsidiary has been notified that other company reserved its right to seek indemnification from us for all costs associated with the remediation of the contamination related to environmental pollution found at a factory in Taiwan owned by the subsidiary's predecessor company, and the costs associated with the lawsuit as well as the costs relating to those retained environmental liabilities in a toxic tort class action lawsuit filed by ex-employees worked at the factory. Though the Group's subsidiary is not a defendant in the class action lawsuit, the claimant initiated arbitration proceedings against us related to all claims arising out of the contamination, including the remediation, the toxic tort claims, and attorneys' fees in December, 2017, but afterward, the arbitration was ordered stayed by the arbitrator on a unilateral request by the claimant.

INDEPENDENT AUDITOR'S QUARTERLY REVIEW REPORT

To the Board of Directors of Renesas Electronics Corporation

Conclusion

We have reviewed the accompanying condensed quarterly consolidated financial statements of Renesas Electronics Corporation and its consolidated subsidiaries (the "Group"), which comprise the condensed quarterly consolidated statement of financial position as of March 31, 2021, the condensed quarterly consolidated statement of profit or loss, the condensed quarterly consolidated statement of comprehensive income, the condensed quarterly consolidated statement of changes in equity, and the condensed quarterly consolidated statement of cash flows for the three-month period then ended and notes to the condensed quarterly consolidated financial statements.

Based on our quarterly review, nothing has come to our attention that causes us to believe that the accompanying condensed quarterly consolidated financial statements do not present fairly, in all material respects, the consolidated financial position of the Group as of March 31, 2021, and its financial performance and cash flows for the three-month period then ended in accordance with International Accounting Standard 34, "Interim Financial Reporting".

Basis for Conclusion

We conducted our review in accordance with quarterly review standards generally accepted in Japan. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Quarterly Review of the Condensed Quarterly Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements in Japan that are relevant to our review of the condensed quarterly consolidated financial statements and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that we have obtained the evidence to provide a basis of our conclusion.

Responsibilities of Management and the Corporate Auditors and Board of Corporate Auditors for the Condensed Quarterly Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the condensed quarterly consolidated financial statements in accordance with International Accounting Standard 34, "Interim Financial Reporting", and for such internal control as management determines is necessary to enable the preparation of the condensed quarterly consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the condensed quarterly consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern and, disclosing in accordance with International Accounting Standard 1, "Presentation of Financial Statements" paragraph 4, as applicable, matters related to going concern, and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Corporate Auditors and Board of Corporate Auditors are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Quarterly Review of the Condensed Quarterly Consolidated Financial Statements

Our responsibility is to express a conclusion on these condensed quarterly consolidated financial statements in our independent auditor's quarterly review report based on our review in accordance with quarterly review standards generally accepted in Japan.

In accordance with quarterly review standards generally accepted in Japan, we exercise professional judgment and maintain professional skepticism throughout the quarterly review. We also:

- Make inquiries, primarily of management and persons responsible for financial and accounting matters, and apply analytical and other quarterly review procedures. A review is substantially less in scope than an audit conducted in accordance with auditing standards generally accepted in Japan.

- Conclude, based on the evidence obtained, on whether anything has come to our attention that causes us to believe that the presentation of the condensed quarterly consolidated financial statements is appropriate in accordance with the paragraph 4 of International Accounting Standard 1, "Presentation of Financial Statements," if we conclude that a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists as to the going concern basis of accounting, we are required to draw attention in our independent auditor's quarterly review report to the related disclosures in the condensed quarterly consolidated financial statements or, if such disclosures are inadequate, to express a qualified or adverse conclusion on the condensed quarterly consolidated financial statements. Our conclusions are based on the evidence obtained up to the date of our independent auditor's quarterly review report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate whether anything has come to our attention that causes us to believe that the presentation and disclosures of the condensed quarterly consolidated financial statements are not in accordance with International Accounting Standard 34, "Interim Financial Reporting", and that the overall presentation, structure and content of the condensed quarterly consolidated financial statements, including the disclosures, and the condensed quarterly consolidated financial statements do not represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain evidence regarding the financial information of the Group to express a conclusion on the condensed quarterly consolidated financial statements. We are responsible for the direction, supervision and performance of the quarterly review of the condensed quarterly consolidated financial statements. We remain solely responsible for our review conclusion.

We communicate with the Corporate Auditors and Board of Corporate Auditors regarding, among other matters, the planned scope and timing of the quarterly review and significant review findings.

We also provide the Corporate Auditors and Board of Corporate Auditors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Interest required to be disclosed by the Certified Public Accountants Act of Japan

Our firm and its designated engagement partners do not have any interest in the Group which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

/s/ Hiroyuki Sawayama

Hiroyuki Sawayama

Designated Engagement Partner
Certified Public Accountant

/s/ Takeaki Ishibashi

Takeaki Ishibashi

Designated Engagement Partner
Certified Public Accountant

/s/ Hitoshi Kondo

Hitoshi Kondo

Designated Engagement Partner
Certified Public Accountant

/s/ PricewaterhouseCoopers Aarata LLC

Tokyo, Japan
May 14, 2021

FINANCIAL SECTION

1. Basis of Preparation of the Condensed Quarterly Consolidated Financial Statements
   The condensed quarterly consolidated financial statements of Renesas Electronics Corporation and its consolidated subsidiaries have been prepared in accordance with International Accounting Standards 34 “Interim Financial Reporting” (hereafter “IAS 34”) pursuant to the provisions of Article 93 of the “Ordinance on Terminology, Forms and Preparation Methods of Quarterly Consolidated Financial Statements” (Cabinet office order No. 64, 2007, hereafter “Regulations for Quarterly Consolidated Financial Statements”).

2. Audit Certification
   The condensed quarterly consolidated financial statements for the three months ended March 31, 2021 (from January 1, 2021 to March 31, 2021) were subject to the interim review by PricewaterhouseCoopers Aarata LLC in accordance with Article 193-2, Section 1, of the Financial Instruments and Exchange Act.

1. Condensed Quarterly Consolidated Financial Statements

1.1 Condensed Quarterly Consolidated Statement of Financial Position

(In millions of yen)

	Notes	As of December 31, 2020	As of March 31, 2021
Assets			
Current assets			
Cash and cash equivalents		219,786	243,627
Trade and other receivables	7	82,318	95,173
Inventories	17	89,761	86,556
Other current financial assets	14	605	1,372
Income taxes receivable		2,190	2,053
Other current assets		8,162	5,500
Total current assets		402,822	434,281
Non-current assets			
Property, plant and equipment		187,354	182,439
Goodwill		590,459	631,591
Intangible assets		364,764	369,694
Other non-current financial assets	14	18,101	23,363
Deferred tax assets		40,600	42,225
Other non-current assets		4,885	4,489
Total non-current assets		1,206,163	1,253,801
Total assets		1,608,985	1,688,082

(In millions of yen)

	Notes	As of December 31, 2020	As of March 31, 2021
Liabilities and equity			
Liabilities			
Current liabilities			
Trade and other payables	8, 14	114,235	125,254
Bonds and borrowings	14	93,181	93,182
Other current financial liabilities	14	4,036	5,109
Income taxes payable		10,337	7,238
Provisions		6,383	8,850
Other current liabilities	17	58,873	47,245
Total current liabilities		287,045	286,878
Non-current liabilities			
Trade and other payables	8, 14	25,177	23,983
Bonds and borrowings	14	586,563	563,591
Other non-current financial liabilities	14	10,241	10,535
Income taxes payable		4,084	4,375
Retirement benefit liability		30,012	29,609
Provisions		3,033	3,035
Deferred tax liabilities		38,680	39,913
Other non-current liabilities		4,489	5,029
Total non-current liabilities		702,279	680,070
Total liabilities		989,324	966,948
Equity			
Share capital		28,971	29,321
Capital surplus		208,253	208,600
Retained earnings		449,975	463,597
Treasury shares		(11)	(11)
Other components of equity		(70,487)	16,467
Total equity attributable to owners of parent		616,701	717,974
Non-controlling interests		2,960	3,160
Total equity		619,661	721,134
Total liabilities and equity		1,608,985	1,688,082

1.2 Condensed Quarterly Consolidated Statement of Profit or Loss and Consolidated Statement of Comprehensive Income

Condensed Quarterly Consolidated Statement of Profit or Loss
(Three months ended March 31, 2020 and March 31, 2021)

(In millions of yen)

	Notes	Three months ended March 31, 2020	Three months ended March 31, 2021
Revenue	6, 9	178,743	203,678
Cost of sales	16, 17	(96,443)	(105,923)
Gross profit		82,300	97,755
Selling, general and administrative expenses	10, 16	(68,326)	(65,830)
Other income	11	633	3,155
Other expenses	12	(1,294)	(4,889)
Operating profit		13,313	30,191
Finance income		3,063	1,618
Finance costs		(2,198)	(14,185)
Profit before tax		14,178	17,624
Income tax expense		(2,820)	(3,818)
Profit		11,358	13,806
Profit attributable to Owners of parent		11,289	13,714
Non-controlling interests		69	92
Profit		11,358	13,806
Earnings per share	13		
Basic earnings per share (yen)		6.60	7.92
Diluted earnings per share (yen)		6.49	7.75

Condensed Quarterly Consolidated Statement of Comprehensive Income
(Three months ended March 31, 2020 and March 31, 2021)

(In millions of yen)

	Notes	Three months ended March 31, 2020	Three months ended March 31, 2021
Profit		11,358	13,806
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Remeasurements of defined benefit plans		266	(98)
Total of items that will not be reclassified to profit or loss		266	(98)
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation of foreign operations		(12,609)	84,766
Cash flow hedges		—	1
Total of items that may be reclassified subsequently to profit or loss		(12,609)	84,767
Total other comprehensive income		(12,343)	84,669
Total comprehensive income		(985)	98,475
Comprehensive income attributable to			
Owners of parent		(920)	98,275
Non-controlling interests		(65)	200
Total comprehensive income		(985)	98,475

1.3 Condensed Quarterly Consolidated Statement of Changes in Equity

(Three months ended March 31, 2020)

(In millions of yen)

	Notes	Equity attributable to owners of parent						
						Other components of equity		
		Share capital	Capital surplus	Retained earnings	Treasury shares	Share acquisition rights	Remeasurements of defined benefit plans	Equity instruments measured at fair value through other comprehensive income
Balance as of January 1, 2020		22,213	201,588	403,857	(11)	16,053	—	(1,131)
Profit		—	—	11,289	—	—	—	—
Other comprehensive income		—	—	—	—	—	266	—
Total comprehensive income		—	—	11,289	—	—	266	—
Issuance of new shares		299	299	—	—	—	—	—
Share-based payment transactions		—	—	—	—	3,310	—	—
Transfer to retained earnings		—	—	497	—	(231)	(266)	—
Total transactions with owners		299	299	497	—	3,079	(266)	—
Balance as of March 31, 2020		22,512	201,887	415,643	(11)	19,132	—	(1,131)

	Notes	Equity attributable to owners of parent				Non-controlling interests	Total equity
		Other components of equity					
		Exchange differences on translation of foreign operations	Cash flow hedges	Total	Total equity attributable to owners of parent		
Balance as of January 1, 2020		(21,114)	—	(6,192)	621,455	2,949	624,404
Profit		—	—	—	11,289	69	11,358
Other comprehensive income		(12,475)	—	(12,209)	(12,209)	(134)	(12,343)
Total comprehensive income		(12,475)	—	(12,209)	(920)	(65)	(985)
Issuance of new shares		—	—	—	598	—	598
Share-based payment transactions		—	—	3,310	3,310	—	3,310
Transfer to retained earnings		—	—	(497)	—	—	—
Total transactions with owners		—	—	2,813	3,908	—	3,908
Balance as of March 31, 2020		(33,589)	—	(15,588)	624,443	2,884	627,327

(Three months ended March 31, 2021)

(In millions of yen)

	Notes	Equity attributable to owners of parent						
						Other components of equity		
		Share capital	Capital surplus	Retained earnings	Treasury shares	Share acquisition rights	Remeasurements of defined benefit plans	Equity instruments measured at fair value through other comprehensive income
Balance as of January 1, 2021		28,971	208,253	449,975	(11)	15,959	—	(1,131)
Profit		—	—	13,714	—	—	—	—
Other comprehensive income		—	—	—	—	—	(98)	—
Total comprehensive income		—	—	13,714	—	—	(98)	—
Issuance of new shares		350	347	—	—	—	—	—
Share-based payment transactions		—	—	—	—	2,301	—	—
Transfer to retained earnings		—	—	(92)	—	(6)	98	—
Total transactions with owners		350	347	(92)	—	2,295	98	—
Balance as of March 31, 2021		29,321	208,600	463,597	(11)	18,254	—	(1,131)

	Notes	Equity attributable to owners of parent				Non-controlling interests	Total equity
		Other components of equity					
		Exchange differences on translation of foreign operations	Cash flow hedges	Total	Total equity attributable to owners of parent		
Balance as of January 1, 2021		(85,315)	—	(70,487)	616,701	2,960	619,661
Profit		—	—	—	13,714	92	13,806
Other comprehensive income		84,658	1	84,561	84,561	108	84,669
Total comprehensive income		84,658	1	84,561	98,275	200	98,475
Issuance of new shares		—	—	—	697	—	697
Share-based payment transactions		—	—	2,301	2,301	—	2,301
Transfer to retained earnings		—	—	92	—	—	—
Total transactions with owners		—	—	2,393	2,998	—	2,998
Balance as of March 31, 2021		(657)	1	16,467	717,974	3,160	721,134

1.4 Condensed Quarterly Consolidated Statement of Cash Flows

(In millions of yen)

	Notes	Three months ended March 31, 2020	Three months ended March 31, 2021
Cash flows from operating activities			
Profit before tax		14,178	17,624
Depreciation and amortization		38,829	32,470
Impairment losses		85	—
Finance income and finance costs		1,576	1,533
Share-based payment expenses		3,904	2,998
Foreign exchange loss (gain)		(1,496)	10,397
Loss (gain) on sales of property, plant and equipment, and intangible assets		(430)	(2,655)
Decrease (increase) in inventories		(6,698)	5,024
Decrease (increase) in trade and other receivables		3,158	(9,682)
Increase (decrease) in trade and other payables		(7,785)	7,755
Increase (decrease) in retirement benefit liability		(128)	(679)
Increase (decrease) in provisions		(3,301)	2,200
Increase (decrease) in other current liabilities		(11,832)	(11,414)
Other		1,241	1,207
Subtotal		31,301	56,777
Interest received		192	63
Dividends received		210	201
Income taxes paid		(2,974)	(9,759)
Net cash flows from operating activities		28,729	47,282
Cash flows from investing activities			
Purchase of property, plant and equipment		(5,599)	(4,608)
Proceeds from sales of property, plant and equipment		626	2,743
Purchase of intangible assets		(4,189)	(2,323)
Purchase of other financial assets		(192)	(1,536)
Proceeds from sales of other financial assets		126	233
Other		(846)	(608)
Net cash flows from investing activities		(10,074)	(6,099)
Cash flows from financing activities			
Repayments of long-term borrowings		(23,418)	(23,293)
Repayments of lease liabilities		(1,465)	(950)
Interest paid		(1,678)	(1,441)
Other		1	(2)
Net cash flows from financing activities		(26,560)	(25,686)
Effect of exchange rate changes on cash and cash equivalents		(1,627)	8,344
Net increase (decrease) in cash and cash equivalents		(9,532)	23,841
Cash and cash equivalents at beginning of the period		146,468	219,786
Cash and cash equivalents at end of the period		136,936	243,627

Notes to Condensed Quarterly Consolidated Financial Statements

1. Reporting Entity

Renesas Electronics Corporation (hereafter “the Company”) is a public company established under the Companies Act of Japan and domiciled in Japan. The accompanying condensed quarterly consolidated financial statements for the three months ended March 31, 2021 (from January 1, 2021 to March 31, 2021) are composed of the Company and its consolidated subsidiaries (hereafter “the Group”). The Group engages in research, design, development, manufacturing, sales and services related to various kinds of semiconductors as a manufacturer specializing in semiconductors. For details of the Group’s major business, please refer to “6. Business Segments.”

The condensed quarterly consolidated financial statements for the three months ended March 31, 2021 are approved on May 14, 2021 by Hidetoshi Shibata, President and CEO, and Shuhei Shinkai, Executive Vice President, Member of the Board and CFO.

2. Basis for Preparation

(1) Compliance with International Financial Reporting Standards (hereafter “IFRS”)

Because the Group meets the requirements for “Specified Companies Complying with Designated International Accounting Standards” stated in Article 1-2 of Regulations for Quarterly Consolidated Financial Statements, the Group has adopted the provisions of Article 93 of the Ordinance. The condensed quarterly consolidated financial statements of the Group have been prepared in accordance with IAS 34 “Interim Financial Reporting”.

The condensed quarterly consolidated financial statements do not contain all of the information required of the consolidated financial statements of the fiscal year. Therefore, the condensed quarterly consolidated financial statements should be used with the consolidated financial statements for the prior fiscal year.

(2) Basis of measurement

In the condensed quarterly consolidated financial statements of the Group, assets and liabilities are measured at a historical cost basis, except for items such as financial instruments measured at fair value.

(3) Functional currency and presentation currency

The condensed quarterly consolidated financial statements are presented in Japanese yen (rounded to the nearest million yen), which is the functional currency of the Company.

3. Significant Accounting Policies

The significant accounting policies for the condensed quarterly consolidated financial statements of the Group are the same with the accounting policies applied in preparing the Group’s consolidated financial statements for the prior fiscal year.

In addition, income taxes for the three months ended March 31, 2021 are calculated using the estimated annual effective tax rate.

4. Significant Accounting Estimates and Judgments

In preparing the condensed quarterly consolidated financial statements, management of the Group makes judgments, accounting estimates and assumptions that could have an impact on the application of accounting policies and the reporting amounts of assets, liabilities, revenue and expenses. These estimates and assumptions are based on the best judgment of management, taking into account various factors that are deemed reasonable on the closing date in light of past experience and available information. However, figures based on these estimates and assumptions may differ from the actual results due to their nature.

Estimates and underlying assumptions are reviewed continuously. The impact of the review of these estimates is recognized in the period when the estimates are revised and future periods.

Estimates and assumptions that could have a significant impact on the figures in the condensed quarterly consolidated financial statements are the same with those stated in the Group’s consolidated financial statements for the prior fiscal year.

The Group reflects the impact of the spread of COVID-19 and the fire outbreak at Naka Factory of Renesas Semiconductor Manufacturing Co., Ltd, a wholly-owned manufacturing subsidiary of the Company on March 19, 2021 within its estimates and assumptions (such as judgment to indication of impairment of goodwill and collectability of deferred tax assets), to a reasonable extent based on available information.

5. Scope of Consolidation

Two companies have been excluded from the scope of consolidation due to liquidation for the three months ended March 31, 2021.

6. Business Segments

(1) Overview of reportable segments

The Group's reportable segments are components of the Group for which separate financial information is available that is evaluated regularly by the Board of Directors to determine the allocation of management resources and assess performance.

The Group mainly consists of "Automotive Business" and "Industrial/Infrastructure/IoT Business" and those are the Group's reportable segments. The Automotive Business includes the product categories "Automotive control," comprising semiconductor devices for controlling automobile engines and bodies, and "Automotive information," comprising of semiconductor devices used in sensing systems for detecting environments inside and outside the vehicle as well as automotive information devices such as IVI (in-vehicle infotainment) and instrument panels used to give various information to the driver of the vehicle. The Group mainly supplies microcontrollers (MCUs), system-on-chips (SoCs), analog semiconductor devices and power semiconductor devices in each of these categories. The Industrial/Infrastructure/IoT Business includes the product categories "Industrial," "Infrastructure" and "IoT" which support the smart society. The Group mainly supplies MCUs and SoCs in each of these categories. Additionally, commissioned development and manufacturing from the Group's design and manufacturing subsidiaries are categorized as "Other."

(2) Information on reportable segments

The accounting treatment for the reportable segments is same as described in "3. Significant Accounting Policies." As for information on the reportable segments, the Group discloses revenue from external customers, segment gross profit, and segment operating profit (which is the segment profit). The Group added segment gross profit as a disclosure item in the business segments from the three months ended March 31, 2021. This change is reflected to the business segments for the three months ended March 31, 2020.

Segment gross profit and segment operating profit are internal key performance indicators which are used by management when making decisions and are calculated by excluding the following items from IFRS gross profit and operating profit (Adjustments 2): amortization of certain tangible and intangible assets related to business combinations; certain share-based payment expenses; and other non-recurring items. Other non-recurring items include costs related to acquisitions and gains and losses the Group believes to be appropriate for deduction. However, certain gains and losses the Group believes to be covered by each reportable segment are included in segment gross profit and segment operating profit of each reportable segment (Adjustments 1). The Group's Executive Officers assess the performance after eliminating intragroup transactions, and therefore, there are no transfers between reportable segments included within the segment results.

Information on reportable segments is as follows.

Three months ended March 31, 2020 (In millions of yen)

	Reportable Segments		Other	Adjustments 1	Total	Adjustments 2	Consolidation basis
	Automotive	Industrial/ Infrastructure/ IoT					
Revenue from external customers	93,548	82,555	2,640	—	178,743	—	178,743
Segment gross profit	36,337	47,883	267	—	84,487	(2,187)	82,300
Segment profit or loss (operating profit or loss)	14,395	18,974	302	—	33,671	(20,358)	13,313
Finance income							3,063
Finance costs							(2,198)
Profit before tax							14,178
(Other adjustments) Depreciation and amortization	13,839	9,896	236	—	23,971	14,858	38,829

Three months ended March 31, 2021 (In millions of yen)

	Reportable Segments		Other	Adjustments 1	Total	Adjustments 2	Consolidation basis
	Automotive	Industrial/ Infrastructure/ IoT					
Revenue from external customers	103,248	96,605	3,825	—	203,678	—	203,678
Segment gross profit	43,818	57,788	415	196	102,217	(4,462)	97,755
Segment profit or loss (operating profit or loss)	22,791	24,888	414	4,514	52,607	(22,416)	30,191
Finance income							1,618
Finance costs							(14,185)
Profit before tax							17,624
(Other adjustments) Depreciation and amortization	11,123	8,069	—	—	19,192	13,278	32,470

(3) Information on products and services

Information on products and services is the same with information on the reportable segments and therefore, omitted from this section.

(4) Information on regions and countries

The components of revenue from external customers by region and country are as follows.

(In millions of yen)

	Three months ended March 31, 2020	Three months ended March 31, 2021
Japan	63,638	71,071
China	38,646	40,245
Asia (Excluding Japan and China)	27,676	39,189
Europe	30,014	33,758
North America	18,043	18,770
Others	726	645
Total	178,743	203,678

(Note) Revenues are categorized into the country or region based on the location of the customers.

7. Trade and Other Receivables

The components of trade and other receivables are as follows.

(In millions of yen)

	As of December 31, 2020	As of March 31, 2021
Notes and trade receivables	77,686	91,547
Other receivables	4,751	3,734
Loss allowance	(119)	(108)
Total	82,318	95,173

(Note) Trade and other receivables are classified as financial assets measured at amortized cost.

8. Trade and Other Payables

The components of trade and other payables are as follows.

(In millions of yen)

	As of December 31, 2020	As of March 31, 2021
Trade payables	67,008	69,335
Other payables	47,433	53,167
Electronically recorded obligations	7,852	7,172
Refund liabilities	17,119	19,563
Total	139,412	149,237
Current liabilities	114,235	125,254
Non-current liabilities	25,177	23,983

(Note) Trade and other payables are classified as financial liabilities measured at amortized cost.

9. Revenue

All of the revenue arises from contracts with customers. In addition, disaggregation of revenue recognized from contracts with customers are stated in “6. Business segments, (2) Information on reportable segments and (4) Information on regions and countries.”

10. Selling, General and Administrative Expenses

The components of selling, general and administrative expenses are as follows.

(In millions of yen)

	Three months ended March 31, 2020	Three months ended March 31, 2021
Research and development expenses	33,285	32,952
Depreciation and amortization	17,147	14,670
Personnel expenses	11,100	10,866
Retirement benefit expenses	554	600
Other	6,240	6,742
Total	68,326	65,830

11. Other Income

The components of other income are as follows.

(In millions of yen)

	Three months ended March 31, 2020	Three months ended March 31, 2021
Gain on sales of property, plant and equipment	470	2,693
Other	163	462
Total	633	3,155

12. Other Expenses

The components of other expenses are as follows.

(In millions of yen)

	Three months ended March 31, 2020	Three months ended March 31, 2021
Provision for loss on litigation	—	3,827
Business restructuring expenses	952	519
Other	342	543
Total	1,294	4,889

13. Earnings Per Share

Basic earnings per share attributable to owners of parent and diluted earnings per share are as follows.

(1) Basic earnings per share

	Three months ended March 31, 2020	Three months ended March 31, 2021
Profit attributable to owners of parent used for the calculation of basic earnings per share (million yen)	11,289	13,714
Weighted average number of ordinary shares during the year (thousands of shares)	1,710,788	1,732,607
Basic earnings per share (yen)	6.60	7.92

(2) Diluted earnings per share

	Three months ended March 31, 2020	Three months ended March 31, 2021
Profit attributable to owners of parent used for the calculation of basic earnings per share (million yen)	11,289	13,714
Adjustments on earnings (million yen)	—	—
Profit used for the calculation of diluted earnings per share (million yen)	11,289	13,714
Weighted average number of ordinary shares during the year before dilution (thousands of shares)	1,710,788	1,732,607
Increase in ordinary shares due to warrants (thousands of shares)	29,739	37,735
Weighted average number of ordinary shares during the year after dilution (thousands of shares)	1,740,527	1,770,342
Diluted earnings per share (yen)	6.49	7.75

14. Financial instruments

(1) Calculation method of fair value

The calculation method of the fair value of financial instruments is as follows.

(a) Cash and cash equivalents, and trade and other receivables

The fair value of these instruments approximates their carrying amount due to their short term maturities.

(b) Trade and other payables

For trade and other payables that will mature within a short amount of time, the fair value approximates the carrying amount. The fair value of trade and other payables that will not mature in a short amount of time is calculated by the present value that is discounted by an interest rate assumed for the case where a similar borrowing is newly made and classified as Level 2.

(c) Securities

If the market price of a security is available in an active market, the securities are measured using this market price and classified as Level 1. If the market price is not available, the fair value is measured mainly by a method based on net assets (method of calculating by making adjustments to the market value as required based on the net assets of the entity that issues shares) and classified as Level 3.

(d) Long-term borrowings

The fair value of long-term borrowings is calculated at the present value that is discounted using an interest rate assumed for the case where a similar borrowing is newly made and classified as Level 2.

(e) Derivative transactions

Forward exchange contracts are calculated based on forward exchange rates and classified as Level 2.

(f) Bonds

The fair value of bonds acquired due to business combination is calculated by referring to a market price and classified as Level 2.

(g) Other financial assets and liabilities

Time deposits with maturities of more than three months, long-term accounts receivable, security deposits and guarantee deposits received that are measured at amortized cost are classified as Level 2. Because their fair value approximates their carrying amount, they are omitted from the following table.

(2) Classification of financial instruments measured at fair value by levels

In the fair value hierarchy, financial instruments are classified from Level 1 to Level 3 as follows.

Level 1: Fair value measured using unadjusted quoted prices in the active markets

Level 2: Fair value other than quoted prices include within Level 1 that are observable, either directly or indirectly

Level 3: Fair value calculated by using a valuation technique including inputs that are not based on observable market data

Transfers between the levels in the fair value hierarchy are recognized on the assumption that the transfers occur at the end of each reporting period.

There is no transfer between levels.

(i) Financial instruments measured at amortized cost

The carrying amount and the fair value of financial instruments measured at amortized cost are as follows. Financial instruments measured at fair value and financial instruments whose carrying amount closely approximates fair value are not included in the table below.

As of December 31, 2020

(In millions of yen)

	Carrying amount	Fair value			
		Level 1	Level 2	Level 3	Total
Financial liabilities					
Borrowings	679,733	—	680,962	—	680,962
Bonds	11	—	11	—	11
Other payables	47,433	—	46,736	—	46,736
Total	727,177	—	727,709	—	727,709

As of March 31, 2021

(In millions of yen)

	Carrying amount	Fair value			
		Level 1	Level 2	Level 3	Total
Financial liabilities					
Borrowings	656,761	—	661,877	—	661,877
Bonds	12	—	12	—	12
Other payables	53,114	—	52,591	—	52,591
Total	709,887	—	714,480	—	714,480

(ii) Financial instruments measured at fair value

The components of financial assets and financial liabilities measured at fair value on a recurring basis that are classified as each level of the fair value hierarchy are as follows.

As of December 31, 2020

(In millions of yen)

	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss				
Investment trust	4,160	—	—	4,160
Unlisted securities	—	—	2,498	2,498
Equity instruments measured at fair value through other comprehensive income				
Unlisted securities	—	—	2,242	2,242
Total	4,160	—	4,740	8,900

As of March 31, 2021

(In millions of yen)

	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss				
Investment trust	4,688	—	—	4,688
Unlisted securities	—	—	3,972	3,972
Derivative assets	—	939	—	939
Equity instruments measured at fair value through other comprehensive income				
Unlisted securities	—	—	2,398	2,398
Total	4,688	939	6,370	11,997
Financial liabilities				
Financial liabilities measured at fair value through profit or loss				
Derivative liabilities	—	1,044	—	1,044
Total	—	1,044	—	1,044

(iii) Changes in financial instruments that are classified as Level 3 are as follows.

(In millions of yen)

	Three months ended March 31, 2020	Three months ended March 31, 2021
Beginning balance	3,926	4,740
Total gains or losses in the period	0	1,630
Profit or loss (Note 1)	0	1,630
Other comprehensive income	—	—
Purchases	—	—
Sales	—	—
Settlement	—	—
Acquisition due to business combination	—	—
Other	—	—
Ending balance	3,926	6,370

(Note) 1. Total gains or losses in the period are for financial assets measured at fair value through profit or loss and included in finance income and finance costs in the condensed quarterly consolidated statement of profit or loss.

2. Financial instruments that are classified as Level 3 consist of unlisted securities. The fair value of unlisted securities is measured by the responsible department in the Group according to the Group accounting policies, using the immediately preceding available figure in each quarter. The measurement results of the fair value are reviewed and approved by an appropriate authorized person.

For the financial instruments classified as Level 3, the Group does not expect that there will be any significant change in the fair value amount even if the assumptions used are changed within a reasonable range.

15. Contingencies

As the Group conducts business worldwide, it is possible that the Group may become a party to lawsuits, investigation by regulatory authorities and other legal proceedings in various countries.

Though it is difficult to predict the outcome of the legal proceedings to which the Group is presently a party or to which it may become a party in future, the resolution of such proceedings may require considerable time and expense. There is a possibility that the Group’s business, performance, financial condition, cash flow, reputation and creditability to have significant adverse effects by the outcome.

The Group records provision for loss on litigation for several cases written below to the extent possible to make a reasonable estimation. Additionally, the Group records loss on litigation for cases other than below, to prepare for payments regarding lawsuits against other companies and compensation for damages. In accordance with IAS 37 “Provisions, Contingent Liabilities and Contingent Assets” Article 92, the Group does not disclose detailed information of these cases since it is likely to lead the Group to an unfavorable position.

(Civil lawsuit related to the alleged patent infringement and trade secret violation)

The Group’s subsidiary has been named as a defendant in a civil lawsuit in the United States related to the alleged patent infringement and trade secret violation. The Group’s subsidiary has been named as a defendant in a lawsuit filed in November 2008 in the United States District Court for the Eastern District of Texas (hereafter “the Court of First Instance”). The Court of First Instance entered a final judgment in June 2016 against the Group in the amount of 77.3 million U.S. dollars; however, the Group’s subsidiary immediately filed a notice of appeal at the Court of Appeals for the Federal Circuit (hereafter “the Court of Second Instance”). In July 2018, the Court of Second Instance rejected the judgement of the Court of First Instance for payment of compensation and conducted the retrial order at the Court of First Instance.

(Civil lawsuits related to the alleged violations of the competition law)

The Group has been named in the United Kingdom as a defendant in civil lawsuits related to possible violations of competition law involving smartcard chips brought by purchasers of such products. One of the cases was brought in July 2019 in the Senior Courts of England and Wales and is currently in progress. The other case was brought in September 2020 in the same court.

(Indemnification claim related to environmental pollution)
The Group's subsidiary in Taiwan has been subjected to requests for restitution for environmental pollution associated with a factory in Taiwan owned by the subsidiary's predecessor company.

Since June 2004, the Group's subsidiary has been notified that an other company reserved its right to seek indemnification from us for all costs associated with the remediation of the contamination related to environmental pollution found at a factory in Taiwan owned by the subsidiary's predecessor company, and the costs associated with the lawsuit as well as the costs relating to those retained environmental liabilities in a toxic tort class action lawsuit filed by ex-employees worked at the factory. Though the Group's subsidiary is not a defendant in the class action lawsuit, the claimant initiated arbitration proceedings against us related to all claims arising out of the contamination, including the remediation, the toxic tort claims, and attorneys' fees in December 2017, but afterward, the arbitration was ordered to stay by the arbitrator on a unilateral request by the claimant.

16. Government Grants
Government grants related to employment or other actions taken by the Group are recognized in profit or loss. Government grants of 162 million yen and 632 million yen were deducted from cost of sales and selling, general and administrative expenses, respectively for the three months ended March 31, 2021. In addition, government grants related to research and development are recognized in profit or loss and recorded in other income.

17. Additional Information
Fire outbreak in a wholly-owned manufacturing subsidiary

On March 19, 2021, a fire broke out at a manufacturing line in the N3 Building (300mm line) of Naka Factory (located in Hitachinaka, Ibaraki Prefecture) of Renesas Semiconductor Manufacturing Co., Ltd, a wholly-owned manufacturing subsidiary of the Company. Due to this fire, certain property, plant and equipment such as machinery and equipment and inventories such as work in progress were damaged.

Regarding the resumption of manufacturing at the N3 Building, the operation of the clean room was resumed on April 9, 2021 and production capacity is just under 10% in comparison to the production capacity before the occurrence of the fire as of April 17, 2021. Production capacity is expected to gradually recover from now on.

Due to this fire, the Group recorded 2,235 million yen for restoration and repairment costs of property, plant and equipment, disposal costs and reinspection fees of inventories and fixed costs during the shutdown for the three months ended March 31, 2021. These are included in cost of sales of 2,218 million yen and other expenses of 17 million yen in the condensed consolidated statement of profit or loss. Due to the disposal of the inventories, inventories in the condensed consolidated statement of financial position decreased 1,077 million yen and accrued expenses of the fire related costs are recorded in other liabilities of 492 million yen. The amounts of loss may change depending on the situation of the repairment of property, plant and equipment and the determination of insurance claim income.

Acquisition of Stock of Dialog Semiconductor Plc (hereafter "Dialog")

On February 8, 2021, the Company has reached an agreement with Dialog in the UK, on the terms of a recommended all-cash acquisition by the Company of the entire issued and to be issued share capital of Dialog, thereby making Dialog a wholly-owned subsidiary of the Company (the "Acquisition").

1) Purpose of the Acquisition
Dialog is an innovative provider of highly-integrated and power-efficient mixed-signal ICs (Integrated Circuits) for a broad array of customers within IoT, consumer electronics and high-growth segments of automotive and industrial end-markets. Centered around its low-power and mixed-signal expertise, Dialog brings a wide range of product offerings including battery and power management, power conversion, configurable mixed-signal (CMIC), LED drivers, custom mixed-signal ICs (ASICs) and automotive power management ICs (PMICs), wireless charging technology, and more. Dialog also offers broad and differentiated Bluetooth® Low Energy (BLE), WiFi and audio system-on-chips (SoCs) that deliver advanced connectivity for a wide range of applications; from smart home/building automation, wearables, to connected medical. All these systems complement and expand the Company's leadership portfolio in delivering comprehensive solutions to improve performance and efficiency in high-computing electronic systems.

The Acquisition demonstrates the Company's continued and unwavering commitment to further advance its solution offering. The complementary nature of the Companies' technological assets and the scale of the combined portfolios will enable the Company to build more robust and comprehensive solutions to serve high-growth segments of the IoT and automotive markets.

2) Overview of the acquiree

(1) Name	Dialog Semiconductor Plc
(2) Address	100 Longwater Avenue, Reading, RG2 6GP, United Kingdom
(3) Business description	Development, manufacturing and sales of analog ICs such as mixed-signal devices
(4) Capital amount	14,253 thousand USD (As of September 2020)
(5) Date of foundation / incorporation	February 1998

3) Acquisition Method

The Company will implement a scheme of arrangement pursuant to UK law. The scheme of arrangement is a method of acquisition whereby, with the agreement of Dialog, the Acquisition will be executed by obtaining approvals from Dialog shareholders and the Court. Through this method, the Company will acquire 100% of the issued and to be issued share capital of Dialog.

The Acquisition needs to be approved by an affirmative vote of a majority of the shareholders in attendance at a meeting of shareholders convened by the Court and the number of the voting rights held by such shareholders who approve the Acquisition needs to represent 75% or more of the total number of voting rights. In addition, approval must be obtained from the Court following the necessary regulatory clearances from the relevant countries including United States, China and Germany.

Number of shares to be acquired, acquisition price, and share ownership before and after the Acquisition are as follows.

(1) Number of shares owned before the Acquisition	0 share (Ownership ratio: 0.0%)
(2) Number of shares to be acquired	72,387,613 shares (Note) (Ratio to the number of issued shares: 100.0%)
(3) Acquisition Value	Approximately EUR 4,886 million (approximately 615.7 billion yen, calculated at 126 yen per euro)
(4) Number of shares owned after the Acquisition	72,387,613 shares (Ratio to the number of issued shares: 100.0%)

Note: The number of shares is on a fully-diluted basis as of December 31, 2020

The Company sent the “Scheme Document” (announcement and procedural document regarding the scheme of arrangement) to the shareholders of Dialog on March 8, 2021 (London time). At the Dialog General Meeting and the Court Meeting held on April 9, 2021 (London time) convened in accordance with the direction of the Court, the scheme of arrangement including the Acquisition has been approved by the shareholders of Dialog.

4) Schedule

As described in the Scheme Document, the completion of the Acquisition is subject to the approval by the relevant regulatory authorities in each country and the approval of the scheme by the Court at the Court hearing. With the aforementioned conditions, the Acquisition is expected to become effective by the end of the fiscal year ending December 31, 2021.

5) Execution of Loan Agreement in relation to the Acquisition

To procure the funds for the Acquisition, the Company entered into a loan agreement (Facilities Agreement) as described below on February 8, 2021.

(1) Borrowing limit	735.4 billion yen
(2) Execution date of agreement	February 8, 2021
(3) Period of loan execution	From the execution date of the Facilities Agreement until February 3, 2022
(4) Repayment date	February 7, 2022
(5) Participating financial institutions	MUFG Bank, Ltd. and Mizuho Bank, Ltd.

6) Filing of Shelf Registration Statement for the Issuance of New Shares

To enable the Company to flexibly issue new shares to procure a portion of the funds for the Acquisition, the Company has filed the Shelf Registration Statement in Japan for the issuance of new shares as follows on February 8, 2021.

(1) Class of Securities to be offered	Shares of common stock of the Company
(2) Scheduled Issue Period	For one year from the scheduled effective date of the Shelf Registration (From February 24, 2021 to February 23, 2022)
(3) Scheduled Issue Amount	Up to 270 billion yen
(4) Offering Method	To be determined
(5) Use of Proceeds	To procure the funds for the Acquisition, or for repayment of the borrowing conducted to procure the fund for the Acquisition
(6) Underwriters	To be determined

18. Subsequent Events

(Grant of share-based payments)

Based on the resolution of the Board of Directors held on February 19, 2021 and the shareholders meeting held on March 31, 2021, the Company introduced performance-linked restricted share unit (Performance Share Unit: PSU) and restricted share unit (Restricted Stock Unit: RSU) from April 2021. These replaced the performance-based One Yen Stock Option (Performance-based Stock Option: PSO) and the tenure-based One Yen Stock Option (Time-based Stock Option: TSO).

The Company resolved the issuance and the granting of the RSU and PSU for Directors and Corporate Officers, and employees of the Company and employees of the subsidiaries at the Board of Directors held on April 9, 2021.

Date of resolution		April 9, 2021
Date of grant of RSU and PSU		April 30, 2021
Category and number of grantees		Outside Directors 2 Director and Corporate Officer 1 Corporate Officers 10 employees 2,922
Vesting conditions	RSU	Vested according to the lapse of the period (One third each will be vested after 1 year, 2 years and 3 years from the date of grant, except that all units will be vested after 1 year from the grant date for the Outside Directors)
	PSU	Vested according to the performance (According to the performance achieved, all units will be vested after 3 years from the grant date)
Number of units	RSU	7,579,400
	PSU	1,195,800
	Total	8,775,200

(Note) 1. Our common stock (1 unit = 1 share) is delivered based on the number of units at the time of vesting the rights. There is no payment from Directors, Corporate Officers and employees at the time of delivering the stocks.

2. The number of units for PSU will be determined based on the number of base units using factors such as the three-year growth rate of the total shareholder return.

[Other]

(1) Matters subsequent to the quarterly period end

None

(2) Lawsuits

Described in “16. Contingent liabilities” of “Condensed Quarterly Consolidated Statement of Financial Position” of the notes to Condensed Quarterly Consolidated Financial Statements in Financial Section.

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Independent auditor's report

to the members of Dialog Semiconductor Plc

Report on the audit of the financial statements

1. Opinion

In our opinion the financial statements of Dialog Semiconductor Plc (the 'Parent Company') and its subsidiaries (the 'Group'):

- give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 31 December 2020 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006 and International Financial Reporting Standards (IFRSs) as adopted by the European Union and IFRSs as issued by the International Accounting Standards Board (IASB);
- the Parent Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard 101 "*Reduced Disclosure Framework*"; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements which comprise:

- the Consolidated statement of income;
- the Consolidated statement of comprehensive income;
- the Consolidated and Parent Company balance sheets;
- the Consolidated statement of cash flows;
- the Consolidated and Parent Company statements of changes in equity; and
- the related Consolidated notes 1 to 34 and the Parent Company notes 1 to 11.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law, international accounting standards in conformity with the requirements of the Companies Act 2006, IFRSs as adopted by the European Union and as issued by the IASB. The financial reporting framework that has been applied in the preparation of the Parent Company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "*Reduced Disclosure Framework*" (United Kingdom Generally Accepted Accounting Practice).

2. Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

We are independent of the Group and the Parent Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We confirm that the non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the Parent Company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

3. Summary of our audit approach

Key audit matters	The key audit matters that we identified in the current year were: • Intangible assets: the valuation of the customer relationship intangible assets identified as part of the acquisition of Adesto Technologies Corporation • Carrying amount of goodwill – revenue growth forecast within the Industrial IoT operating segment Within this report, key audit matters are identified as follows: Newly identified Increased level of risk Similar level of risk Decreased level of risk
Materiality	We determined materiality for the Group financial statements to be US$9.0 million based upon a range of benchmarks in recognition of the enlarged group following the acquisition of Adesto Technologies Corporation (“Adesto”) and its contribution to Group revenue, profit before tax and net assets. This represents 7.6% of profit before tax and 5.5% of profit before tax excluding the non-recurring goodwill impairment charge of US$44.9 million. Parent Company materiality has been determined to be US$8.9 million, which represents 1.5% of its net assets, capped at 99% of Group materiality.
Scoping	We conducted full scope audit procedures on the Parent Company as well as the four largest components, which represent 96% of the Group’s revenue, 69% of the Group’s profit before tax and 76% of Group’s net assets. We performed specified audit procedures on six additional components, which increased our coverage to cover 99% of Group revenue, 91% of the Group’s profit before tax and 92% of Group’s net assets. The number of locations included in our audit scoping increased from previous years as a result of the acquisition of Adesto by the Group during the year.
Significant changes in our approach	We highlight the following changes to our key audit matters from the prior year: • *Revenue recognition – the identification and measurement of performance obligations within the licensing and asset transfer agreement with Apple* The Group entered in to a significant licensing and asset transfer agreement with Apple during the prior year which had a significant revenue impact in 2019. Since no similar agreement was entered into during 2020, we determined that this no longer represents a key audit matter. • *Intangible assets: the valuation of the customer relationship intangible assets identified as part of the acquisition of Adesto Technologies Corporation* The acquisition of Adesto completed on 29 June 2020. As part of the purchase price allocation (PPA) exercise, intangible assets of US$157.9 million were identified including US$87.7 million in relation to the application-specific standard products (“ASSP”) customer relationship intangible. We consider the key assumptions used within the PPA exercise, particularly the estimates involved in forecasting future revenue growth, to be a key audit matter.

4. Conclusions relating to going concern

In auditing the financial statements, we have concluded that the Directors’ use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Our evaluation of the Directors’ assessment of the Group’s and Parent Company’s ability to continue to adopt the going concern basis of accounting included our risk assessment, taking into account the nature of the Group, its business model and related risks, the requirements of the applicable financial reporting framework and the system of internal control. In view of the uncertainty surrounding the impact of the Covid-19 pandemic, management modelled a number of scenarios. We have evaluated this assessment, including challenging the underlying data and key assumptions by comparing to external sources used to make the assessment. We also evaluated the Directors’ plans for future actions in relation to their going concern assessment.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group’s and Parent Company’s ability to continue as a going concern for a period of at least twelve months from when the financial statements were authorised for issue.

Our responsibilities and the responsibilities of the Directors with respect to going concern are described in the relevant sections of this report.

5. Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

5.1. Intangible assets: the valuation of the customer relationship intangible assets identified as part of the acquisition of Adesto Technologies Corporation – refer to Note 3 to the consolidated financial statements.

Key audit matter description	On 29 June 2020, Dialog completed the acquisition of Adesto Technologies Corporation paying a total consideration of US$416.9 million. The PPA identified US$157.9 million of intangibles including US$87.7 million in relation to the ASSP customer relationship intangible asset. The provisional goodwill arising from the acquisition was US$318.9 million. Given the significant judgements made by management in determining the key assumptions used in valuing the ASSP customer relationship intangible asset, particularly the estimates involved in forecasting future revenue growth, we have performed audit procedures requiring a high degree of auditor judgement and increased effort, including the need to involve our fair value specialists and this has therefore been identified as a key audit matter.
How the scope of our audit responded to the key audit matter	Our audit procedures were focused on challenging the appropriateness of the judgements made by management and the application of those judgements within the valuation of the ASSP customer relationship intangible asset. These included the following: • We obtained an understanding of relevant controls in relation to management's identification and valuation of acquired intangibles with the PPA exercise including management's oversight and use of a third party expert. • We enquired of management, including individuals outside of finance, to understand and challenge the assumptions in the revenue forecasts with focus on those used in measuring the ASSP customer relationships intangible asset. • We evaluated the reasonableness of the revenue growth rates assumed by management in the valuation models by comparing them to third party analyst and industry reports. • We evaluated management's ability to accurately forecast future revenues of acquired entities by comparing the forecast revenues made for recent acquisitions compared to the actual performance to assess historical accuracy of forecasting. • With the assistance of our valuation specialists we have tested both the appropriateness and application of management's methodology used in the valuation models. • We tested the mathematical accuracy of the valuation models used in determining the fair value of the ASSP customer relationship intangible. • We assessed the appropriateness of the disclosure about business combinations included within the consolidated financial statements.
Key observations	Our audit procedures did not identify any material misstatement within the provisional ASSP customer relationship intangible and we are satisfied that assumptions used within the valuation are within an acceptable range of values.

5.2. Carrying amount of goodwill – revenue growth forecast within the Industrial IoT operating segment – Refer to Note 14 to the consolidated financial statements

Key audit matter description	The Group's evaluation of goodwill for impairment involves the comparison of the recoverable amount of each operating segment to which goodwill is allocated to its carrying amount. Recoverable amount represents the higher of fair value less costs to sell and value in use. The Group used a discounted cash flow model to estimate value in use, which requires significant estimates and assumptions. Changes in these assumptions could have a significant impact on the amount of any goodwill impairment charge and the disclosures made in the financial statements. As part of the acquisition of Adesto, provisional goodwill of US$318.9 million was recorded within the Adesto operating segment. During the third quarter of 2020, management identified an indicator of impairment and following an impairment test of the Adesto segment in which management assessed the fair value less costs to sale and the value in use, an impairment of US$44.9 million was recorded. During the fourth quarter, the Group's reorganised their business units, bringing together Adesto and the Industrial Mixed Signal business unit to form a single new operating segment, named Industrial IoT, with a combined goodwill of US$306.4 million. The value in use of Industrial IoT during the year-end impairment review exceeded the carrying amount, therefore, no additional impairment has been recognised. We identified a key audit matter in respect of revenue growth forecasts in ASSP within the Adesto operating segment (as at the end of third quarter of 2020) and Industrial IoT operating segment (as at 31 December 2020). Given the significant judgements made in determining the forecast revenue used in the value in use models, we have performed audit procedures requiring a high degree of auditor judgement and increased effort to evaluate the reasonableness of the estimates and assumptions.
How the scope of our audit responded to the key audit matter	Our audit procedures related to the impairment review focused on the appropriateness of the revenue growth rates assumed in the cash flow forecasts of ASSP within the Adesto operating segment (as at the end of the third quarter of 2020) and Industrial IoT operating segment (as at 31 December 2020). These included the following: • We obtained an understanding of relevant controls in relation to the annual impairment evaluation process, in particular key controls that ensure the reasonableness of the Board-approved three-year Strategic Plan, the ten-year forecasts used in the value in use model, and the preparation and review of the impairment assessment. • We evaluated management's ability to accurately forecast future revenues by comparing current year forecast of revenue growth to actual performance to assess historical accuracy of forecasting, with special focus on assessing the performance of the Industrial IoT operating segment against forecasts. • We obtained evidence of post year-end order backlogs and 2021 trading to date and compared this to the initial forecast assumptions. • We evaluated the reasonableness of the revenue growth rates assumed by management in the value in use models by comparing them to third party analyst and industry reports. • We tested the mathematical accuracy of the fair value less costs to sell assessment and value in use models. • We evaluated the appropriateness of the sensitivity disclosures included within the consolidated financial statements.
Key observations	Our audit procedures did not identify any additional impairment of goodwill other than the US$44.9 million recorded during the third quarter of 2020 and we are satisfied that the impairment assessment is reasonable and in accordance with IFRS. We are satisfied that the revenue forecasts supporting management's impairment review are within an acceptable range of values.

6. Our application of materiality

6.1. Materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Parent Company financial statements
Materiality	US$9.0 million (2019: US$11.2 million)	US$8.9 million (2019: US$11.1 million)
Basis for determining materiality	We have considered a number of benchmarks including profit before tax (PBT), revenue and net assets, and selected US$9.0 million as our materiality, which represents 7.6% of PBT and 5.5% of PBT excluding the non-recurring goodwill impairment charge of US$44.9 million. Our prior year materiality was based upon 5% of PBT adjusted for the impact of the one-off effects of the Apple transaction.	The Parent Company materiality equates to 1.5% of Parent Company net assets of US$923.7 million, capped at 99% of Group materiality. In 2019, our materiality was based on 1.5% of net assets of US$923.7 million, capped at 99% of Group materiality.
Rationale for the benchmark applied	For 2020, we determined materiality based upon a range of benchmarks in recognition of the enlarged group following the acquisition of Adesto and its contribution to Group revenue, profit before tax and net assets.	Our base for determining materiality is in line with the prior year. We consider net assets to be a key benchmark for users of the financial statements, including customers, suppliers and other parties such as tax authorities.

6.2. Performance materiality

We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole.

	Group financial statements	Parent Company financial statements
Performance materiality	70% (2019: 70%) of Group materiality	70% (2019: 70%) of Parent Company materiality
Basis and rationale for determining performance materiality	In determining performance materiality, we considered a number of factors including the quality of the control environment, including the control deficiencies identified, as well as the low level of corrected and uncorrected misstatements.	

6.3. Error reporting threshold

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of US$450,000 (2019: US$559,000), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

7. An overview of the scope of our audit

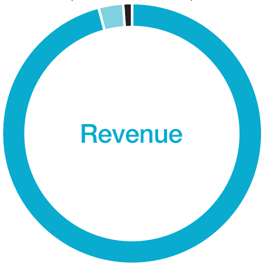
7.1. Identification and scoping of components

Our Group audit was scoped by obtaining an understanding of the Group and its environment, including an understanding of geographical positioning of accounting processing, management decision making and risk of material misstatement at the Group level.

The Group has operations across Europe, North America and Asia; however, the majority of transactional accounting processing as well as the consolidation is performed in Germany with the newly-acquired Adesto's transactional accounting processing being performed in the US, both of which closely co-ordinates with the UK head office finance team.

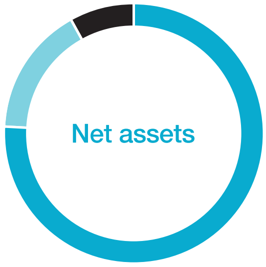
We have components located in Germany and the US as well as two components and the Parent Company located in the UK where we performed full scope audits, covering 96% (2019: 99%) of revenue, 69% (2019: 80%) of profit before tax and 76% (2019: 98%) of net assets.

For six other components, we performed specified audit procedures on defined balances and transactions, which increased our coverage to cover 99% of revenue (2019: 99%), 91% of profit before tax (2019: 96%) and 92% of net assets (2019: 98%) as detailed below:



Full audit scope	96%
Specified audit procedures	3%
Review at Group level	1%

Full audit scope	69%
Specified audit procedures	22%
Review at Group level	9%



Full audit scope	76%
Specified audit procedures	16%
Review at Group level	8%

● Full audit scope ● Specified audit procedures ● Review at Group level

7.2 Working with other auditors

We engaged both our German and US member firms to perform the audit of the components subject to the Group's finance function based in Nabern, Germany and Santa Clara, USA respectively. This included both full scope and specified audit balance testing supporting the Group audit opinion. The Group audit team was in active dialogue throughout the audit with the component audit teams responsible for the audit work under the direction and supervision of the Group audit team. This included determining whether the work was planned and performed in accordance with the overall Group audit strategy and the requirements of our Group audit instructions to the component audit teams.

The Group audit team held regular communication with the component auditors in planning for, and throughout, the year-end audit process. In light of the travel restrictions and widespread lockdowns resulting from the Covid-19 pandemic we were not able to complete our normal planned visits. In response to these restrictions, we enhanced our remote oversight through a number of measures, as appropriate to each component, including more frequent dialogue and use of video conferencing and screen-sharing facilities.

8. Other information

The other information comprises the information included in the Annual Report, other than the financial statements and our auditor's report thereon. The Directors are responsible for the other information contained within the Annual Report.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated.

If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

9. Responsibilities of Directors

As explained more fully in the Directors' responsibilities statement, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the Directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Directors are responsible for assessing the Group's and the Parent Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting, unless the Directors either intend to liquidate the Group or the Parent Company or to cease operations, or have no realistic alternative but to do so.

10. Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

11. Extent to which the audit was considered capable of detecting irregularities, including fraud

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below.

11.1. Identifying and assessing potential risks related to irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, we considered the following:

- the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for Directors' remuneration, bonus levels and performance targets;
- results of our enquiries of management, internal audit, internal legal counsel and the Audit Committee about their own identification and assessment of the risks of irregularities;
- any matters we identified having obtained and reviewed the Group's documentation of their policies and procedures relating to:
  - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance;
  - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud;
  - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations;
- the matters discussed among the audit engagement team including the component audit team and relevant internal specialists, including tax, valuations and information technology specialists, regarding how and where fraud might occur in the financial statements and any potential indicators of fraud.

As a result of these procedures, we considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud in the following areas: management override of controls and the identification and interpretation of undocumented or additional contractual terms impacting revenue recognition.

We also obtained an understanding of the legal and regulatory frameworks that the Group operates in, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the financial statements. The key laws and regulations we considered in this context included among others, the UK Companies Act, German listing rules and tax legislation in the UK, the USA and Germany.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which may be fundamental to the Group's ability to operate or to avoid a material penalty.

11.2 Audit response to risks identified

As a result of performing the above, we did not identify any key audit matters related to the potential risk of fraud or non-compliance with laws and regulations.

Our procedures to respond to risks identified included the following:

- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the financial statements;
- enquiring of management, the Audit Committee and in-house as well as external legal counsel concerning actual and potential litigation and claims;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud;
- obtaining confirmations from third party customers as to the completeness of contractual terms agreed and the existence of undocumented or additional contractual terms;
- reading minutes of meetings of those charged with governance, reviewing internal audit reports and reviewing regulatory correspondence; and

- in addressing the risk of fraud through management override of controls, testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members including internal specialists and significant component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

Report on other legal and regulatory requirements

12. Opinions on other matters prescribed by the Companies Act 2006

In our opinion the part of the Directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the Directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the Directors' report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the Group and the Parent Company and their environment obtained in the course of the audit, we have not identified any material misstatements in the strategic report or the Directors' report.

13. Matters on which we are required to report by exception

13.1. Adequacy of explanations received and accounting records

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the Parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the Parent Company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

13.2. Directors' remuneration

Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of Directors' remuneration have not been made or the part of the Directors' remuneration report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

14. Other matters which we are required to address

14.1. Auditor tenure

Following the recommendation of the Audit Committee, we were appointed by the Directors of Dialog Semiconductor Plc on 25 January 2016 to audit the financial statements for the year ending 31 December 2015 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm is six years, covering the years ended 31 December 2015 to 31 December 2020.

14.2. Consistency of the audit report with the additional report to the Audit Committee

Our audit opinion is consistent with the additional report to the Audit Committee we are required to provide in accordance with ISAs (UK).

15. Use of our report

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Mark Tolley FCA
(Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
Reading, UK
3 March 2021

Consolidated statement of income

Year ended 31 December

	Note	**2020 US$000**	2019 US$000	2018 US$000
Revenue	5,32	**1,375,924**	1,566,239	1,442,138
Cost of sales		**(697,805)**	(717,703)	(751,070)
Gross profit		**678,119**	848,536	691,068
Selling and marketing expenses		**(107,568)**	(92,951)	(83,877)
General and administrative expenses		**(103,221)**	(101,587)	(84,351)
Research and development expenses		**(325,860)**	(313,550)	(326,309)
Other operating (expense)/income	5	**(20,595)**	39,405	3,176
Operating profit	5,32	**120,875**	379,853	199,707
Interest income	8	**6,086**	21,950	9,883
Interest expense	8	**(8,173)**	(11,309)	(3,134)
Other finance expense	8	**(1,885)**	(5,456)	(10,263)
Profit before income taxes		**116,903**	385,038	196,193
Income tax expense	9	**(32,408)**	(83,586)	(55,281)
Profit after income taxes		**84,495**	301,452	140,912
Share of loss of associate		**–**	–	(1,113)
Net income		**84,495**	301,452	139,799

Earnings per share (US$)	10			
Basic		**1.24**	4.19	1.89
Diluted		**1.17**	3.96	1.80
Weighted average number of ordinary shares (in thousands)	10			
Basic		**68,051**	71,896	73,959
Diluted		**72,239**	76,181	77,655

Consolidated statement of comprehensive income

Year ended 31 December

	Note	**2020 US$000**	2019 US$000	2018 US$000
Net income		**84,495**	301,452	139,799
Other comprehensive income				
Items that may be reclassified to profit or loss in subsequent periods				
Currency translation differences on foreign operations:				
– Gain/(loss) recognised in the year		**2,603**	2,710	(527)
– Loss transferred to profit or loss on disposal of a subsidiary	4	**–**	309	–
– Related income tax credit/(expense)		**370**	(91)	(78)
Cash flow hedges:				
– Fair value gain/(loss) recognised on effective hedges in the year		**8,116**	(3,941)	(10,075)
– Fair value (gain)/loss transferred to profit or loss in the year		**(607)**	9,549	(2,343)
– Related income tax (expense)/credit		**(1,427)**	(1,065)	2,376
		9,055	7,471	(10,647)
Items that will not be reclassified to profit or loss				
Equity investments:				
– Fair value gain/(loss) in the year	18	**53**	(6,994)	(23,764)
– Related income tax credit		**–**	–	1,015
Remeasurements of net defined benefit liability:				
– Remeasurements recognised in the year	24	**235**	(666)	–
– Related income tax (expense)/credit		**(46)**	146	–
		242	(7,514)	(22,749)
Other comprehensive income/(loss) for the year		**9,297**	(43)	(33,396)
Total comprehensive income for the year		**93,792**	301,409	106,403

Consolidated balance sheet

As at 31 December

	Note	2020 US$000	2019 US$000
Assets			
Cash and cash equivalents	11	**523,880**	1,024,544
Trade and other receivables	12	**120,629**	134,079
Other current financial assets	19	**8,476**	1,056
Inventories	13	**159,393**	122,624
Income tax receivables		**13,689**	1,052
Other current assets	20	**18,006**	22,532
Total current assets		**844,073**	1,305,887
Goodwill	14	**756,838**	482,134
Other intangible assets	15	**390,990**	272,068
Property, plant and equipment – owned	16	**60,728**	61,138
Property, plant and equipment – leased	17	**40,602**	41,423
Investments	18	**3,533**	3,110
Other non-current financial assets	19	**2,263**	2,202
Other non-current assets	20	**3,701**	780
Deferred tax assets	9	**18,790**	8,242
Total non-current assets		**1,277,445**	871,097
Total assets		**2,121,518**	2,176,984
Liabilities and equity			
Trade and other payables	21	**151,847**	104,620
Lease liabilities	17	**11,767**	8,972
Other current financial liabilities	22	**49,899**	124,373
Provisions	23	**6,945**	4,162
Income taxes payable		**8,167**	18,491
Other current liabilities	25	**115,128**	112,804
Total current liabilities		**343,753**	373,422
Lease liabilities	17	**32,357**	34,072
Other non-current financial liabilities	22	**25,379**	80,963
Provisions	23	**3,590**	3,102
Net defined benefit liability	24	**6**	1,727
Deferred tax liabilities	9	**12,142**	23,070
Other non-current liabilities	25	**49,763**	88,044
Total non-current liabilities		**123,237**	230,978
Ordinary shares	26	**14,253**	14,204
Share premium account		**403,660**	403,660
Retained earnings		**1,454,908**	1,451,582
Other reserves	26	**(216,402)**	(274,729)
Dialog shares held by employee benefit trusts	28	**(1,891)**	(22,133)
Total equity		**1,654,528**	1,572,584
Total liabilities and equity		**2,121,518**	2,176,984

These financial statements were approved by the Board of Directors on 3 March 2021 and were signed on its behalf by:

Dr Jalal Bagherli
Director

Consolidated statement of cash flows

Year ended 31 December

	Note	**2020 US$000**	2019 US$000	2018 US$000
Cash flow from operating activities				
Net income		**84,495**	301,452	139,799
Non-cash items within net income:				
– Amortisation of intangible assets	15	**60,903**	52,233	49,130
– Depreciation of property, plant and equipment	16, 17	**35,544**	39,611	31,455
– Impairment of non-current assets	14	**44,900**	3,130	–
– Increase in inventory reserve, net		**3,743**	11,133	5,643
– Share-based compensation expense		**58,630**	46,539	41,153
– Deferred licence revenue	4	**(35,707)**	(18,484)	–
– Gain on transfer of design centre businesses	4	**–**	(15,898)	–
– Other non-cash items		**(10,335)**	2,812	6,590
Effective IP licence fee received	4	**–**	136,400	–
Interest expense/(income), net		**2,087**	(10,641)	(6,749)
Income tax expense		**32,408**	83,586	55,281
Cash generated from operations before changes in working capital		**276,668**	631,873	322,302
Changes in working capital:				
– Increase in trade and other receivables		**(74,910)**	(95,189)	(36,310)
– (Increase)/decrease in inventories		**(3,656)**	23,196	13,615
– Decrease/(increase) in prepaid expenses		**3,108**	(893)	56
– Increase/(decrease) in trade and other payables		**3,957**	(23,107)	15,968
– Increase/(decrease) in provisions		**1,747**	(1,661)	3,089
– Change in other assets and liabilities		**(2,899)**	15,449	2,852
Cash generated from operations		**204,015**	549,668	321,572
Interest paid		**(3,906)**	(4,322)	(530)
Interest received		**7,743**	21,638	8,714
Income taxes paid		**(65,609)**	(70,519)	(41,107)
Cash inflow from operating activities		**142,243**	496,465	288,649
Cash flows from investing activities				
Purchase of property, plant and equipment		**(19,410)**	(12,129)	(26,145)
Purchase of intangible assets		**(7,256)**	(8,437)	(6,197)
Payments for capitalised development costs		**(13,746)**	(15,384)	(24,771)
Purchase of businesses, net of acquired cash	3	**(407,865)**	(139,806)	(12,840)
Proceeds from transfer of design centres, net of cash disposed	4	**–**	27,814	–
Cash outflow from investing activities		**(448,277)**	(147,942)	(69,953)
Cash flows from financing activities				
Receipt of prepayment from Apple	4	**–**	288,584	–
Cash settlements of prepayment from Apple	4	**(12,917)**	(20,345)	–
Purchase of own shares into treasury	27	**(80,500)**	(251,774)	–
Settlement of currency hedges on share buyback obligation		**1,503**	(11,625)	–
Settlement of Adesto convertible notes	3	**(92,114)**	–	–
Capital element of lease payments	17	**(9,734)**	(11,086)	(1,651)
Repayment of bank loans		**(697)**	(156)	–
Purchase of shares by employee benefit trusts		**–**	–	(21,786)
Sale of shares by employee benefit trusts		**291**	3,362	3,617
Cash outflow from financing activities		**(194,168)**	(3,040)	(19,820)
Net cash (outflow)/inflow during the year		**(500,202)**	345,483	198,876
Cash and cash equivalents at the beginning of the year		**1,024,544**	677,848	479,295
Currency translation differences		**(462)**	1,213	(323)
Cash and cash equivalents at the end of the year	11	**523,880**	1,024,544	677,848

An analysis of changes in liabilities arising from financing activities is presented in note 22.

Consolidated statement of changes in equity

Year ended 31 December

	Ordinary shares US$000	Share premium account US$000	Retained earnings US$000	Other reserves (note 26) US$000	Dialog shares held by employee benefit trusts US$000	Total US$000
As at 31 December 2017	14,204	403,660	915,482	9,977	(902)	1,342,421
Adjustment on initial application of IFRS 15	–	–	1,541	–	–	1,541
Adjusted balance as at 1 January 2018	14,204	403,660	917,023	9,977	(902)	1,343,962
Year ended 31 December 2018						
Net income	–	–	139,799	–	–	139,799
Other comprehensive loss	–	–	–	(33,396)	–	(33,396)
Total comprehensive income/(loss)	–	–	139,799	(33,396)	–	106,403
Other changes in equity:						
– Share buyback obligation	–	–	(171,187)	–	–	(171,187)
– Purchase of shares by employee benefit trusts	–	–	–	–	(21,786)	(21,786)
– Sale of shares by employee benefit trusts	–	–	3,443	–	174	3,617
– Share-based compensation, including tax credit of US$345	–	–	41,498	–	–	41,498
As at 31 December 2018	14,204	403,660	930,576	(23,419)	(22,514)	1,302,507
Adjustment on initial application of IFRS 16	–	–	40	–	–	40
Adjusted balance as at 1 January 2019	14,204	403,660	930,616	(23,419)	(22,514)	1,302,547
Year ended 31 December 2019						
Net income	–	–	301,452	–	–	301,452
Other comprehensive (loss)/income	–	–	(520)	477	–	(43)
Total comprehensive income	–	–	300,932	477	–	301,409
Other changes in equity:						
– Purchase of own shares into treasury	–	–	(4,431)	(251,787)	–	(256,218)
– Share buyback obligation	–	–	169,505	–	–	169,505
– Sale of shares by employee benefit trusts	–	–	2,981	–	381	3,362
– Share-based compensation, including tax credit of US$5,440	–	–	51,979	–	–	51,979
As at 31 December 2019	14,204	403,660	1,451,582	(274,729)	(22,133)	1,572,584
Year ended 31 December 2020						
Net income	**–**	**–**	**84,495**	**–**	**–**	**84,495**
Other comprehensive income	**–**	**–**	**189**	**9,108**	**–**	**9,297**
Total comprehensive income	**–**	**–**	**84,684**	**9,108**	**–**	**93,792**
Other changes in equity:						
– Purchase of own shares into treasury	**–**	**–**	**1,374**	**(80,500)**	**–**	**(79,126)**
– Share buyback obligation	**–**	**–**	**908**	**–**	**–**	**908**
– Cancellation of treasury shares	**(449)**	**–**	**(129,270)**	**129,719**	**–**	**–**
– Shares issued to employee benefit trust	**498**	**–**	**–**	**–**	**(498)**	**–**
– Sale of shares by employee benefit trusts	**–**	**–**	**(20,449)**	**–**	**20,740**	**291**
– Share-based consideration	**–**	**–**	**5,096**	**–**	**–**	**5,096**
– Share-based compensation, including tax credit of US$2,353	**–**	**–**	**60,983**	**–**	**–**	**60,983**
As at 31 December 2020	**14,253**	**403,660**	**1,454,908**	**(216,402)**	**(1,891)**	**1,654,528**

Notes to the consolidated financial statements
For the year ended 31 December 2020

1. Background

Description of business
Dialog Semiconductor Plc (“the Company”) is a public limited company that is incorporated in England and Wales and domiciled in the United Kingdom. The Company’s ordinary shares are listed on the Frankfurt Stock Exchange.

Dialog creates and markets mixed-signal integrated circuits, optimised for personal, portable, hand-held devices, low energy short-range wireless, backlighting and LED solid state lighting, industrial and automotive applications. Following a segment reorganisation that became effective during the fourth quarter of 2020, Dialog has four reporting segments: Custom Mixed Signal; Advanced Mixed Signal; Connectivity & Audio; and Industrial IoT. Segment information is presented in note 32.

Registered office
The Company’s registered office is at Tower Bridge House, St Katharine’s Way, London E1W 1AA, United Kingdom.

Statement of compliance
The consolidated financial statements of the Company and its subsidiaries (together, “Dialog” or “the Group”) set out on pages 122 to 182 have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as adopted for use in the European Union, the Disclosure and Transparency Rules of the United Kingdom’s Financial Conduct Authority, the disclosure requirements of the German Securities Trading Act (“WpHG”) and those parts of the Companies Act 2006 that are applicable to companies reporting under IFRS and therefore comply with Article 4 of the IAS Regulation. The consolidated financial statements also comply with IFRS as issued by the International Accounting Standards Board (“IASB”).

Basis of preparation
The consolidated financial statements have been prepared on a going concern basis and in accordance with the historical cost convention, except that certain investments, derivative financial instruments and contingent consideration are measured at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Information about assets and liabilities that are measured at fair value is presented in note 30.

The Group’s significant accounting policies are set out in note 2.

Going concern
At the time of approving the financial statements, the Directors are required to form a judgement as to whether the Group and the Company have adequate resources to continue in operational existence for the foreseeable future. In forming their judgement, the Directors consider the Group’s current financial position, its medium-term plan and its budget for the next financial year, and the principal risks and uncertainties that it faces. The Directors have also considered the proposed acquisition of the Company by Renesas Electronics Corporation that was announced on 8 February 2021.

At the end of 2020, the Group held cash and cash equivalents of US$524 million and currently has an undrawn committed revolving credit facility of US$150 million. Based on the Group’s most recent plan and budget, the Directors expect that the Group will continue to be cash generative over the next 12 months, even in the downside scenario that they considered regarding the impact of the Covid-19 pandemic. For these reasons, the Directors have adopted the going concern basis in preparing the consolidated financial statements.

Use of estimates
The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, as well as disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual outcomes could differ from those estimates and assumptions and affect the Group’s results in future periods.

Presentation currency
The consolidated financial statements are presented in US dollars (“US$”), which is the functional currency of the Company. All US dollar amounts are in thousands (“US$000”), except where stated otherwise.

Approval of the consolidated financial statements
The consolidated financial statements for the year ended 31 December 2020 were authorised for issue by the Board of Directors on 3 March 2021.

Company financial statements
Separate financial statements for the Company are set out on pages 183 to 189.

Relevant accounting standards adopted during the year

Covid-19-Related Rent Concessions (Amendments to IFRS 16)
In May 2020, the IASB published an amendment to IFRS 16 *Leases* to make it easier for lessees to account for rent concessions, such as rent holidays and temporary rent reductions, that are granted as a direct consequence of the Covid-19 pandemic. The amendment exempts lessees from having to determine whether such Covid-19-related rent concessions are lease modifications and allows lessees to account for them as if they were not lease modifications. It applies to Covid-19-related rent concessions that reduce rent payments due on or before 30 June 2021. We applied the amendment with effect from 1 January 2020 and recognised a resulting credit of US$252 for rent concessions in profit or loss during 2020.

Definition of a Business (Amendments to IFRS 3)
In October 2018, the IASB published amendments to IFRS 3 *Business Combinations* aimed at resolving the difficulties that can arise when an entity determines whether it has acquired a business or a group of assets. In summary, the amendments clarify that to be considered a business, an acquired set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs and narrow the definition of outputs by focusing on goods and services provided to customers. We adopted the amendments with effect for acquisitions completed on or after 1 January 2020.

Definition of Material (Amendments to IAS 1 and IAS 8)
In October 2018, the IASB published amendments to IAS 1 *Presentation of Financial Statements* and IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* to clarify the definition of material in those standards and align with the definition used in the Conceptual Framework. We adopted the amendments with effect from 1 January 2020 and they have not yet caused us to reach a different conclusion as to whether an item is or is not material.

Interest Rate Benchmark Reform – Phase 1 (Amendments to IFRS 9 and IFRS 7)
Interbank offered rates ("IBORs") are benchmark interest rates, such as LIBOR, and EURIBOR, that represent the cost of obtaining unsecured funding, in a particular combination of currency and maturity and in a particular interbank term lending market. Work is underway in multiple jurisdictions to transition to alternative benchmark interest rates.

In September 2019, the IASB published amendments to IFRS 9 *Financial Instruments* and IFRS 7 *Financial Instruments: Disclosures* to clarify that during the transition period entities should continue to apply certain hedge accounting requirements assuming that the interest rate benchmark on which the hedged cash flows and cash flows from the hedging instrument are based will not be altered as a result of interest rate benchmark reform. We adopted the Phase 1 amendments with effect from 1 January 2020 and will make reference to them if we engage in interest rate hedging activities in a market in which existing benchmark interest rates have not been replaced.

Consequences of Brexit for the consolidated financial statements
On 31 January 2020, the UK ceased to be a member of the European Union and entered a transition period that ended on 31 December 2020.

Since 2005, Dialog has prepared its consolidated financial statements in accordance with IFRS as adopted for use in the European Union ("EU-adopted IFRS"). Following the end of the transition period, the UK Government introduced its own process for endorsing IFRS for use in the UK ("UK-adopted IFRS"). For financial periods beginning on or after 1 January 2021, Dialog will prepare its consolidated financial statements for filing in the UK in accordance with UK-adopted IFRS.

At the end of the transition period, the UK adopted IFRS that had been adopted for use in the EU. IFRS that had not been endorsed by the EU at the end of the transition period will be subject to the UK endorsement process.

Relevant accounting standards issued by the IASB but not yet adopted

Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)
In January 2020, the IASB published amendments to IAS 1 *Presentation of Financial Statements* to clarify that the classification of liabilities with an uncertain settlement date as current or non-current is based on rights that exist at the end of the reporting period.

In July 2020, the IASB deferred the effective date of the amendments by one year. Subject to their endorsement for use in the UK, the amendments will now be effective for annual periods beginning on or after 1 January 2023.

We do not consider that the amendments would have changed the classification of any liabilities that were recognised as at 31 December 2020.

Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)
In May 2020, the IASB published amendments to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* that specify that the cost of fulfilling a contract comprises the costs that relate directly to the contract, which can be either the incremental costs of fulfilling that contract or an allocation of other costs that relate directly to fulfilling contracts. Subject to their endorsement for use in the UK, the amendments will be effective for annual periods beginning on or after 1 January 2022. We do not currently have any material provisions for onerous contracts.

Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IFRS 7 and IFRS 16)
In August 2020, the IASB published amendments to IFRS 9 *Financial Instruments* and IFRS 7 *Financial Instruments: Disclosures* and IFRS 16 *Leases* that address the issues that might affect financial reporting when an existing interest rate benchmark is actually replaced. These amendments introduce a practical expedient for modifications required by IBOR reform, clarify that hedge accounting is not discontinued solely because of the reform, and introduce disclosures about the risks to an entity arising from IBOR reform and how the entity is managing those risks. The Phase 2 amendments are effective for annual periods beginning on or after 1 January 2021. We are not currently exposed to significant risks arising from IBOR reform.

Definition of Accounting Estimates (Amendments to IAS 8)
In February 2021, the IASB published amendments to IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* that introduce a definition of an accounting estimate and clarify that a change in an accounting estimate that results from new information or new developments is not the correction of an error. Subject to their endorsement for use in the UK, the amendments will be effective for annual periods beginning on or after 1 January 2023. We do not expect that the amendments will have any practical impact on our accounting for estimates.

2. Significant accounting policies

Basis of consolidation
The consolidated financial statements incorporate the results, cash flows and assets and liabilities of the Company, its subsidiaries and sponsored employee benefit trusts.

A subsidiary is an entity that is controlled, either directly or indirectly, by the Company. Control exists when the Company is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the relevant activities of the entity. Generally, such power exists where the Company holds a majority of the voting rights of an entity. When the Company holds less than a majority of the voting rights of an entity, it considers all relevant facts and circumstances in assessing whether or not its voting rights are sufficient to give it power to direct the activities that significantly affect its returns from the entity, including: the size of the Company's holding of voting rights relative to the size and dispersion of the holdings of other vote holders; potential voting rights held by the Company, other vote holders or other parties; and rights arising from other contractual arrangements.

Details of the Company's subsidiaries as at 31 December 2020 are set out on page 204.

Consolidation of a subsidiary commences when the Company obtains control over the subsidiary and ceases at such time as control over the subsidiary is lost. Transactions and balances between members of the Group, and any unrealised profits or losses on such transactions, are eliminated on consolidation.

Changes in the Company's ownership interest in a subsidiary that do not result in a loss of control are accounted for within equity.

Business combinations
A business combination is a transaction or other event in which the Company obtains control over a business.

Business combinations are accounted for using the acquisition method.

Goodwill acquired in a business combination is recognised as an intangible asset and represents the excess of the aggregate of the consideration transferred, including contingent consideration, and the amount of any non-controlling interests in the acquired business over the net total of the identifiable assets and liabilities of the acquired business at the acquisition date. Any shortfall, negative goodwill, is recognised immediately as a gain in profit or loss.

Consideration transferred represents the sum of the fair values at the acquisition date of the assets given, liabilities incurred or assumed and equity instruments issued by the Group in exchange for control over the acquired business.

Acquisition-related costs are charged to profit or loss in the period in which they are incurred.

Identifiable assets and liabilities of the acquired business are measured at their fair value at the acquisition date, except for certain items that are measured in accordance with the relevant Group accounting policy, such as replacement equity-settled share-based compensation awards and deferred tax assets and liabilities.

Non-controlling interests that entitle their holders to a proportionate share of the net assets of the acquired business in the event of a liquidation are measured either at fair value or at the non-controlling interest's proportionate share of the identifiable assets and liabilities of the business. Other non-controlling interests are measured at fair value.

Contingent consideration is subsequently measured at fair value unless it is classified as equity. Changes in the fair value of contingent consideration that result from events after the acquisition date are recognised in profit or loss. Contingent consideration that is classified as equity is not remeasured and its subsequent settlement is accounted for within equity.

Associates
An associate is an entity over which the Company has significant influence. Significant influence is the power to participate in financial and operating policy decisions but not to control or jointly control them. Significant influence generally exists where the Company holds, directly or indirectly through one or more of its subsidiaries, more than 20% and less than 50% of the shareholders' voting rights.

Associates are accounted for using the equity method, whereby the Group's investment is initially recognised at cost and the carrying amount is increased or decreased to reflect the Group's share of the profit or loss of the associate. Losses of an associate in excess of the Group's interest in the entity are not recognised, except to the extent that the Group has incurred obligations or made payments on behalf of the associate.

Foreign currency translation
Each entity within the Group has a functional currency, which is normally the currency in which the entity primarily generates and expends cash. The functional currency of the Company and its principal subsidiaries is the US dollar.

At entity level, a foreign currency is a currency other than the entity's functional currency. Sales, purchases and other transactions denominated in foreign currencies are recorded in the entity's functional currency at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rate ruling at the balance sheet date. Currency translation differences arising at entity level are recognised in profit or loss.

The Group's presentation currency is the US dollar. Foreign operations are therefore those of the Company's subsidiaries and associates whose functional currency is not the US dollar.

On consolidation, the results of foreign operations are translated into US dollars at the average exchange rate for the period and their assets and liabilities are translated into US dollars at the exchange rate ruling at the balance sheet date.

Currency translation differences arising on consolidation are recognised in other comprehensive income and taken to the currency translation reserve. In the event that a foreign operation is sold, the related cumulative currency translation difference recognised in other comprehensive income is reclassified from equity to profit or loss and is included in calculating the gain or loss on disposal of the foreign operation.

Revenue recognition
We generate revenue principally through the sale of products that we have developed. Revenue is also generated from product and IP development services and from licence fees and royalties for the use of our IP.

Sales of products
Sales of products are made direct to end-customers and to distributors.

Revenue from the sale of products is recognised when the customer obtains control of the products. We consider that control passes when the products are transferred to the customer. Accordingly, where products are sold on "ex-works" incoterms, revenue is recognised when the products are released for collection by the customer. Otherwise, revenue is recognised when the products are delivered to the customer. Where products are supplied on a consignment basis, delivery takes place and revenue is recognised when the products are taken out of the consignment by the customer.

Revenue recognised on the sale of products is measured at the fair value of the consideration received or receivable, excluding sales taxes and after making allowance for rebates and product returns.

Where we sell to a distributor on "ship and debit" terms, the distributor may be entitled to a rebate if the distributor sells the product to end-customers at a price lower than the price at which the distributor purchased the products from us. Rebates are estimated using the expected value method based on actual rebates granted at the distributor and product level during the preceding quarter so as to reflect current pricing trends.

Most of our distributor customers are entitled to limited rights of return, referred to as stock rotation rights. Typically, returns are allowed twice-yearly for a credit of up to a percentage of the value of products shipped by us to the distributor during the preceding six-month period. Revenue on sales to distributors is recognised after making an allowance for stock rotation claims that is estimated based on stock rotation credits granted at the distributor level during the preceding six-month period.

As permitted by IFRS 15 *Revenue from Contracts with Customers*, we do not capitalise the incremental costs of obtaining contracts (such as sales representatives' commissions) because the amortisation period of such costs would be one year or less.

Product and IP development services
Our Industrial IoT business provides product and IP development services to customers. Revenue from these services is recognised by reference to the stage of completion of the contract, measured by reference to the costs incurred for work performed to date as a percentage of the estimated total contract costs. If it becomes probable that a contract will be loss making, immediate provision is made for the expected loss.

Licensed intellectual property
Where a licence provides the customer with the "right to use" the related IP as it exists at a point in time, the licence revenue is recognised when the licence is granted. Where a licence provides the customer with a "right to access" the related IP as it develops during the licence period, the licence revenue is recognised over the licence period.

Sales or usage-based royalties are recognised when the subsequent sale or usage occurs.

Research and development expenditure
All research expenditure is expensed as it is incurred.

Development expenditure is also expensed as it is incurred until such time as it can be demonstrated that the product is both technically feasible and commercially viable and that management intends to complete the development of the product and sell it to customers. Development expenditure incurred after that time and before the developed product is available to be put into full production is capitalised. Generally, development expenditure is expensed until relatively late in the development process when prototypes are available for quality and other tests.

Contributions to product development costs
We typically develop ASICs to a customer's specification wholly at our own risk but, in some cases, the customer agrees to make a contribution towards our product development costs.

Contributions to product development costs are recognised when we have the right to invoice the customer but only to the extent of the development costs incurred that are expected to be recoverable.

Contributions to product development costs are presented as other operating income.

Government grants
Government grants are not recognised until there is reasonable assurance that Dialog will comply with the conditions attached to them and that the grants will be received.

A grant that is receivable as compensation for expenses incurred is recognised in profit or loss in the period in which it becomes receivable and is deducted from the related expense. A grant whose primary condition is that Dialog should purchase, construct or otherwise acquire a non-current asset is recognised as deferred revenue and transferred to profit or loss on a straight-line basis over the useful life of the related asset.

Goodwill
Goodwill acquired in a business combination is carried at cost as established at the acquisition date, less impairment losses, if any.

Internally generated goodwill is not recognised as an asset.

Other intangible assets
Other intangible assets comprise identifiable intangibles acquired in business combinations (principally customer-related assets and developed technology), licences, computer software, patents and product development costs.

Other intangible assets held by the Group have finite useful lives and are therefore carried at cost less accumulated amortisation and impairment losses, if any. Cost comprises the purchase price of the asset (including non-refundable purchase taxes) and any costs directly attributable to preparing the asset for its intended use, or, in the case of an asset acquired in a business combination, is its fair value at the acquisition date.

Other intangible assets are amortised on a straight-line basis so as to charge their cost to profit or loss over their estimated useful lives as follows:

	Useful life
Acquired customer-related assets	2 to 15 years
Software, licences and other	1 to 20 years
Patents	1 to 10 years
Product development assets	1 to 5 years

Patents are typically granted for a period of 20 years but they are amortised over the period during which the Group expects to benefit from them, which is typically ten years.

Estimated useful lives are regularly reviewed and the effect of any change in estimate is accounted for on a prospective basis.

Property, plant and equipment – owned
Property, plant and equipment is measured at cost less accumulated depreciation and impairment losses, if any. Cost comprises the purchase price of the asset (including non-refundable purchase taxes) and any costs directly attributable to bringing the asset to the location and condition necessary to enable its intended use, or, in the case of an asset acquired in a business combination, is its fair value at the acquisition date. Leasehold improvements include the estimated cost of any obligation to restore the leased property to its original condition at the end of the lease.

Costs of replacing a significant part of an asset are included in the cost of the asset but routine repairs and maintenance costs are recognised in profit or loss when they are incurred.

Items of property, plant and equipment are depreciated on a straight-line basis so as to charge their cost, less their estimated residual value, if any, to profit or loss over their estimated useful lives as follows:

	Useful life
Buildings	33 & 50 years
Test equipment	2 to 10 years
Leasehold improvements	Shorter of useful life or lease term
Office and other equipment	1 to 5 years
Office furniture and fittings	5 to 15 years

Estimated residual values and useful lives are regularly reviewed and the effect of any change in estimate is accounted for on a prospective basis.

Assets that are under construction are not depreciated.

Property, plant and equipment – leased
We adopted IFRS 16 *Leases* with effect from 1 January 2019 using the modified retrospective approach, whereby information presented for prior periods was not restated.

Following the adoption of IFRS 16, property, plant and equipment that we control as lessee is represented by a right-of-use asset and an associated lease liability except where the lease is short-term or the underlying asset is of low value.

On the commencement date of a lease, the lease liability is measured at the present value of the future lease payments discounted using the interest rate implicit in the lease, if that rate can be readily determined, or using the lessee entity's incremental borrowing rate. Future lease payments comprise fixed payments, less any lease incentives receivable, variable payments that depend on an index or rate and, where applicable, amounts expected to be paid under a residual value guarantee, a purchase option or by way of termination penalties.

Variable lease payments that do not depend on an index or rate are not reflected in the lease liability and are recognised in profit or loss in the period in which the event that triggers those payments occurs.

After the commencement date, the carrying amount of the lease liability is increased to reflect interest on the lease liability, reduced to reflect lease payments made and remeasured to reflect reassessments of the future lease payments or certain lease modifications.

Interest on the lease liability is recognised in profit or loss (within interest expense).

On the commencement date of a lease, the right-of-use asset is measured at cost which comprises the initial amount of the lease liability, any lease payments made at or before the commencement date, less any lease incentives received, and any initial direct costs that we incur in relation to the lease.

After the commencement date, the right-of-use asset is measured at cost less accumulated depreciation and any accumulated impairment losses and adjusted for any remeasurement of the lease liability. Right-of-use assets are depreciated so as to charge their cost to profit or loss (in arriving at operating profit), usually on a straight-line basis over the lease term.

As permitted by IFRS 16, we elected not to recognise right-of-use assets and lease liabilities in respect of short-term leases (leases that have a lease term of 12 months or less) or leases involving an underlying asset of low value (an asset with a value when new of less than US$5 or foreign currency equivalent). We recognise the lease payments for those leases as an expense in profit or loss (in arriving at operating profit) on a straight-line basis over the lease term.

Prior to adopting IFRS 16, leases that confer rights and obligations similar to those that attach to owned assets were classified as finance leases. All other leases were classified as operating leases.

Assets held under finance leases were recognised as assets within property, plant and equipment, initially measured at the fair value of the leased asset or, if lower, the present value of the minimum lease payments, and a corresponding liability was recognised. Subsequently, the assets were depreciated over the shorter of the expected useful life of the asset or the lease term. At inception of the lease, the lease payments were apportioned between a capital element and an interest element so as to achieve a constant periodic rate of interest on the outstanding liability. Subsequently, the interest element was recognised as an expense in profit or loss while the capital element was applied to reduce the outstanding liability over the lease term.

Operating lease payments, net of any incentives receivable, were recognised in profit or loss on a straight-line basis over the lease term.

Impairment of tangible and intangible assets
Goodwill, other intangible assets and property, plant and equipment are tested for impairment whenever events or circumstances indicate that their carrying amounts may not be recoverable. Additionally, goodwill and intangible assets still under development are subject to an annual impairment test.

An asset is impaired to the extent that its carrying amount exceeds its recoverable amount. An asset's recoverable amount represents the higher of the asset's value in use and its fair value less costs to sell. An asset's value in use represents the present value of the future cash flows expected to be derived from the asset in its current use and condition. Fair value less cost to sell is the amount expected to be obtainable from the sale of the asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.

Where it is not possible to estimate the recoverable amount of an individual asset, the recoverable amount is determined for the cash-generating unit ("CGU") to which the asset belongs. An asset's CGU is the smallest group of assets that includes the asset and generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. Goodwill does not generate cash flows independently of other assets and is, therefore, tested for impairment at the level of the CGU or group of CGUs that are expected to benefit from the synergies of the related business combination.

Value in use is based on estimates of pre-tax cash flows in the periods covered by budgets and/or plans that have been approved by the Board. Such cash flow estimates are discounted at a pre-tax discount rate that reflects the risks specific to the asset or the CGU or group of CGUs to which the asset belongs.

Impairment losses are recognised in profit or loss.

Impairment losses recognised in previous periods for assets other than goodwill are reversed if there has been a change in the estimates used to determine the asset's recoverable amount, but only to the extent that the carrying amount of the asset does not exceed its carrying amount had no impairment been recognised in previous periods. Impairment losses in respect of goodwill are not reversed.

Financial instruments

Trade and other receivables
Trade receivables represent the invoiced amount of sales of goods to customers for which payment has not been received, less an allowance for doubtful accounts. As permitted by IFRS 9 *Financial Instruments*, we recognise an allowance for credit losses in respect of trade receivables from initial recognition measured as the amount of the lifetime expected credit losses.

When a trade receivable is determined to be uncollectable it is written off, firstly against any allowance made and then directly to profit or loss. Subsequent recoveries are credited to profit or loss.

Trade receivables sold under receivables financing facilities are derecognised from the balance sheet because the financial institutions concerned assume the credit risk associated with them. Retentions held by the financial institutions are recognised as other receivables.

Cash and cash equivalents
Cash and cash equivalents include cash at bank, cash available on demand from receivables financing facilities, investments in money market funds and bank deposits with an original maturity of three months or less. Cash held on deposit is measured at amortised cost. Investments in money market funds are measured at fair value through profit or loss because the return on the funds does not involve solely payments of principal and interest.

Interest income on cash and cash equivalents is accrued on a time basis.

We normally recognise an allowance for credit losses in respect of cash and cash equivalents that is measured as the amount of expected credit losses over the next 12 months. If, however, the risk of default has increased significantly since initial recognition, we measure the allowance as the amount of lifetime credit losses.

Equity investments
Equity investments are initially measured at fair value plus transaction costs, if any. Equity investments are subsequently measured at fair value with resulting gains and losses recognised in profit or loss unless we irrevocably elect for such gains and losses to be recognised in other comprehensive income. We have made this election in respect of our investments in the common shares of Energous Corporation and Semitech Semiconductor Pty Ltd because we hold them for strategic reasons and therefore do not consider that it is appropriate to recognise short-term fluctuations in their fair values in profit or loss.

Trade and other payables
Trade payables represent the amount of invoices received from suppliers for purchases of goods and services for which payment has not been made. Long-term payables are discounted where the effect is material.

Bank and other loans
Bank and other loans are initially measured at fair value plus transaction costs, if any. Such loans are subsequently measured at amortised cost using the effective interest method.

Facility arrangement costs are amortised over the term of the facility.

Derivative financial instruments
We use derivative financial instruments to reduce the Group's exposure to currency exchange rate movements and hold equity options and warrants in relation to certain of its strategic investments. We do not hold or issue derivatives for speculative purposes.

All derivative financial instruments are recognised as assets and liabilities measured at fair value. Unless a derivative is in a designated and effective cash flow hedging relationship, all fair value gains and losses are recognised in profit or loss. Where the fair value of a derivative on initial recognition differs from the transaction price, if any, the difference is recognised immediately in profit or loss only if the fair value is evidenced by a quoted price in an active market or is based on a valuation technique that uses only data from observable markets.

Offsetting financial instruments
Financial assets and financial liabilities are offset and the net amount presented in the balance sheet where there is a currently enforceable legal right to offset the recognised amounts and management intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

Inventories
Inventories comprise raw materials, work in progress and finished goods.

Inventories are stated at the lower of cost and net realisable value, with due allowance for any excess, defective or obsolete items.

Cost is determined using the first-in, first-out ("FIFO") method. Cost of finished goods and work in progress includes materials, direct labour, other direct costs and related production overheads. Net realisable value is the estimated selling price, less estimated costs of completion and estimated selling, marketing and distribution costs.

Contract balances

Contract assets represent the amount of revenue recognised on product and IP development services contracts that has not yet been billed to the customer and therefore transferred to trade and other receivables. Contract assets are included within other assets.

Contract liabilities represent amounts billed to customers in excess of revenue recognised on product and IP development services contracts. Contract liabilities are included within other liabilities.

Hedge accounting

The Group uses forward currency contracts to hedge its exposure to exchange rate movements on forecast operating expenses denominated in foreign currencies, principally the Euro and the pound sterling. Where possible, these contracts are designated as hedging instruments in cash flow hedge relationships. Changes in the fair value of such hedging instruments are recognised in other comprehensive income to the extent that the hedges are effective. Ineffective portions are recognised in profit or loss immediately. Cumulative fair value gains and losses recognised in other comprehensive income are reclassified from equity to profit or loss when the forecast cash flow occurs.

Hedge accounting is discontinued if we revoke the hedge relationship, when the hedging instrument expires or is sold, terminated or exercised, or when it no longer qualifies for hedge accounting. If the hedging instrument expires or is sold, terminated or exercised, or if the hedge relationship no longer meets the conditions for hedge accounting, the cumulative fair value gain or loss remains in equity until the forecast cash flow occurs. If the hedged forecast cash flow is no longer expected to occur, the cumulative fair value gain or loss is reclassified from equity to profit or loss immediately.

Income taxes

Current tax is the amount of tax payable or recoverable in respect of the taxable profit or loss for the period. Taxable profit differs from accounting profit because it excludes income or expenses that are recognised in the period for accounting purposes but are either not taxable or not deductible for tax purposes or are taxable or deductible in earlier or subsequent periods. Current tax is calculated using tax rates and laws that have been enacted or substantively enacted at the balance sheet date.

Deferred tax is tax expected to be payable or recoverable on temporary differences between the carrying amount of an asset or liability in the financial statements and its tax base used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary differences to the extent that it is probable that taxable profits will be available in the future against which they can be utilised.

Deferred tax assets and liabilities are not recognised in respect of temporary differences arising from the initial recognition of goodwill or from the initial recognition of other assets or liabilities in a transaction other than a business combination that affects neither accounting profit nor taxable profit.

Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries, except where we are able to control the reversal of the temporary difference and it is probable that it will not reverse in the foreseeable future.

Deferred tax assets and liabilities are measured using the tax rates that are expected to apply when the asset is realised or the liability is settled, based on tax rates and laws that have been enacted or substantively enacted at the balance sheet date.

Where there is uncertainty concerning the tax treatment of an item or group of items, the amount of current and deferred tax recognised is based on management's expectation of the likely outcome of the examination of the uncertain tax treatment by the relevant tax authorities. Uncertain tax treatments are reviewed regularly and current and deferred tax amounts are adjusted to reflect changes in facts and circumstances, such as the expiry of limitation periods for assessing tax, administrative guidance given by the tax authorities and court decisions.

Current tax assets and liabilities are offset when there is a legally enforceable right to set off the amounts and management intends to settle on a net basis. Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on the same taxable entity.

Current tax and deferred tax is recognised in profit or loss unless it relates to an item that is recognised in the same or a different period outside profit or loss, in which case the related tax is also recognised outside profit or loss, either in other comprehensive income or directly in equity.

Provisions
Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable (more likely than not) that the Group will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Provisions for product warranty claims are established when the sale is recognised based on historical trends of warranty costs as a percentage of product revenues.

Provisions for the dilapidation of leasehold property represent the estimated cost of restoring the property to its original condition at the end of the lease.

Provisions for employee termination benefits are recognised when the employees who will be affected have been made aware of the Group's plans and can determine the nature and amount of the benefits they will receive when their employment is terminated.

Provisions are discounted if the effect of the time value of money is material.

Post-retirement benefit plans

Defined contribution plans
Contributions to defined contribution and state-funded pension plans are recognised in profit or loss in the period to which the contributions relate.

Defined benefit plan
As described in note 24, the Group has one defined benefit pension plan in South Korea.

A net defined benefit liability is recognised in respect of the plan that represents the excess of the present value of the benefit obligation over the fair value of the plan assets. The benefit obligation is measured on an actuarial basis using the projected unit credit method and is discounted using a discount rate derived from high-quality corporate bonds with a similar duration as the benefit obligation. The plan assets are measured at their fair value.

We recognise the current service cost and net interest on the net defined benefit liability in profit or loss. The current service cost represents the increase in the present value of the defined benefit obligation resulting from employee service in the period. Net interest on the net defined benefit liability is determined by multiplying the net defined benefit liability by the discount rate applied to the benefit obligation, both as determined at the beginning of each year, but taking into account contributions and benefit payments during the period.

We recognise the effect of remeasurements of the net defined benefit liability in other comprehensive income. Remeasurements comprise actuarial gains and losses arising due to changes in actuarial assumptions and experience adjustments and the difference between the return on plan assets and the component of the net interest on the net defined benefit liability recognised in profit or loss that is attributable to the plan assets.

Share-based compensation
As described in note 28, the Company operates share-based compensation plans under which it grants options and other awards over its ordinary shares to employees of its subsidiaries. Awards granted under the existing plans are classified as equity-settled awards. We recognise a compensation expense that is based on the fair value of the awards measured at the grant date using the Black-Scholes option pricing formula or a Monte Carlo valuation model. Fair value is not subsequently remeasured unless relevant conditions attaching to the awards are modified.

Fair value reflects any market performance conditions and all non-vesting conditions. Adjustments are made to the compensation expense to reflect actual and expected forfeitures due to failure to satisfy service conditions or non-market performance conditions.

We recognise the resulting compensation expense on a systematic basis over the vesting period and a corresponding credit is recognised in equity. In the event of the cancellation of an option or an award by the Company or by the participating employee, the compensation expense that would have been recognised over the remainder of the vesting period is recognised immediately in profit or loss.

Payroll taxes are payable in the UK and in certain other jurisdictions on the exercise or vesting of awards. Provision is made for such taxes based on the intrinsic value of the relevant awards at the balance sheet date so as to accrue for the taxes payable over the vesting period of the awards.

Shares held by employee benefit trusts
The Group provides finance to two trusts to purchase the Company's ordinary shares in order to meet its obligations under its share-based compensation plans. When the trusts purchase such shares, the cost of the shares is debited to equity and subsequent sales or transfers of the shares by the trusts are accounted for within equity.

Treasury shares
Treasury shares comprise the Company's ordinary shares that have been purchased under the Company's share buyback programme and have not been subsequently sold, transferred or cancelled. Purchases made under the programme are off market and are effected by way of contingent forward share purchase contracts with third-party brokers. On inception of each tranche, a liability is recognised for the maximum cost of the shares to be purchased under the tranche and there is a corresponding debit to retained earnings. On intermediate and final settlement of purchases with the broker, the cost of the shares purchased is credited to retained earnings and debited to treasury shares within equity. On final settlement, any remaining balance of the liability is credited back to retained earnings.

Subsequent sales, transfers or cancellations of treasury shares by the Company are accounted for within equity.

Critical accounting judgements and key sources of estimation uncertainty
The preparation of financial statements requires management to make judgements and estimates that affect the reported amount of assets and liabilities at the date of the financial statements and the reported amount of income and expenses during the reporting period.

Critical judgements in applying accounting policies
Critical judgements are the judgements, apart from those involving estimations, that management has made that have had the most significant effect on amounts included in the consolidated financial statements.

Product development costs
Product development costs are capitalised from the time when the technical feasibility and commercial viability of the product can be demonstrated. Management is therefore required to make judgements about the technical feasibility of the product based on engineering studies and the commercial viability of the product based on expectations concerning the marketability of the product, the product's useful life and the extent of future demand from customers. During 2020, we incurred product development costs of US$345,231 (2019: US$334,684), of which US$13,746 (2019: US$15,384) was capitalised and US$5,624 (2019: US$5,750) was offset by R&D expenditure credits.

Uncertain tax treatments
Uncertainty may exist concerning the tax treatment of a specific item or group of items because of, for example, uncertainty as to the meaning of tax law or to the applicability of tax law to a particular transaction or circumstance, the determination of appropriate arm's length pricing in accordance with OECD transfer pricing principles or because the amount of current and deferred tax depends on the results of an ongoing or future examination of previously filed tax returns by the tax authorities.

Where such an uncertainty exists, management is required to exercise its judgement in forming its expectation as to the likely outcome of the examination of the uncertain tax treatment by the relevant tax authorities. Due to the complexity of tax laws and their interpretation, the amount ultimately agreed with the tax authorities may differ materially from the amount of current and deferred tax recognised in the consolidated financial statements. Accordingly, the resolution of uncertain tax treatments in future periods may give rise to adjustments to the amounts of current and deferred tax assets and liabilities that may have a material consequential effect on the income tax expense recognised in future periods.

Key sources of estimation uncertainty
Key sources of estimation uncertainty are those that have a significant risk of resulting in a material adjustment to the carrying amount of assets and liabilities within the next financial year.

Recoverability of goodwill
Goodwill is tested for impairment annually and whenever there is an indication that it may be impaired. Goodwill is tested for impairment at the level of the operating segment to which it is allocated. Goodwill is impaired if the carrying amount of the operating segment to which it is allocated exceeds its recoverable amount. Goodwill impairment tests conducted in 2020 measured the recoverable amount on a value in use basis. Value in use represents the present value of the future cash flows expected to be generated by an operating segment to which goodwill is allocated and its calculation requires management to estimate those cash flows and apply a suitable discount rate to them.

As at 31 December 2020, the carrying amount of goodwill was US$756,838. With the exception of Industrial IoT, the recoverable amount of each operating segment to which goodwill is allocated was comfortably in excess of its carrying amount. Our annual impairment tests performed during November 2020 showed that Industrial IoT's recoverable amount exceeded its carrying amount by US$105,534. During the third quarter of 2020, we recognised an impairment loss of US$44,900 in relation to the goodwill recognised on the acquisition of Adesto that is allocated to Industrial IoT. A further impairment loss may be recognised within the next financial year if

Industrial IoT's actual cash flows in 2021 differ significantly from management's estimates and/or there is a significant reduction in the forecast cash flows beyond 2021, or if market conditions were to cause a significant increase in the discount rate applied to those cash flows.

Further information about the goodwill impairment tests conducted during 2020 and the sensitivity of the value in use of Industrial IoT to changes in the key underlying assumptions is presented in note 14.

3. Business combinations

Year ended 31 December 2020

Acquisition of Adesto

On 29 June 2020, we completed the acquisition of 100% of the equity interests in Adesto Technologies Corporation ("Adesto") at a price of US$12.55 per share in cash.

Adesto is a leading provider of innovative non-volatile memory, custom ICs and embedded systems for the IIoT market. Headquartered in Santa Clara, California, and listed on NASDAQ, Adesto had approximately 270 employees when acquired and an established portfolio of industrial solutions for smart building automation that complements our range of manufacturing automation products. Adesto's solutions are sold across the industrial, consumer, medical, and communications markets.

On completion, we paid US$397,215 in cash for Adesto's outstanding issued common shares and US$8,447 in cash to settle Adesto's 'in the money' outstanding vested employee share awards.

On completion, Adesto's "in the money" outstanding unvested employee share awards were converted into either replacement Dialog restricted share units or the right to receive future cash payments, which are generally subject to the vesting schedule and other terms (including a service condition) that governed the awards that they replaced. We determined that the acquisition date fair value of the replacement awards was US$26,019 (net of an allowance of US$1,664 for expected forfeitures), of which US$11,225 was attributable to employee service rendered before the acquisition date and therefore represented deferred consideration. We are recognising the balance of the acquisition date fair value of the replacement awards of US$14,794 as an employee compensation expense over the remaining vesting periods of the awards.

During 2020, we paid US$5,944 in settlement of the consideration element of the deferred cash rights that reflected accelerated vesting of those rights in accordance with employee change of control arrangements. We recognised a credit of US$25 to profit or loss on the forfeiture of the consideration element of the deferred cash rights. At the end of 2020, the remaining liability for the deferred consideration was US$151 that is expected to be settled over the period to July 2024.

In September 2019, Adesto issued 4.25% Convertible Notes 2024 ("the Notes"). In the event of a change in control, the indenture governing the Notes gave the noteholders a number of options, of which the most advantageous to them was the option to convert the Notes into a right to receive a cash payment equivalent to the intrinsic value of the Notes on conversion into Adesto's common shares at the transaction price of US$12.55 per share plus a "make whole" amount. All of the noteholders chose the conversion option and the Notes were settled for cash payments totalling US$98,207 during the third quarter of 2020. At the same time as issuing the Notes, Adesto entered into privately negotiated capped call options over its own common shares. Immediately following completion, Adesto terminated the options and shortly afterwards received US$6,093 in cash from the issuers in settlement of the fair value of the options based on the transaction price of US$12.55 per share.

Our provisional allocation of the purchase consideration to the identifiable assets and liabilities of Adesto and goodwill is as follows:

	US$000
Assets acquired	
Cash and cash equivalents	4,749
Trade and other receivables	22,819
Inventories	36,901
Intangible assets	157,943
Property, plant and equipment – owned	4,864
Property, plant and equipment – leased	6,557
Deferred tax assets	4,789
Other assets	15,096
Total assets acquired	**253,718**
Liabilities assumed	
Trade and other payables	43,567
Convertible notes	98,207
Lease liabilities	6,557
Other liabilities	7,374
Total liabilities	**155,705**
Net identifiable assets acquired	**98,013**
Goodwill arising on acquisition	318,875
Consideration	**416,888**

Purchase consideration was satisfied by:	
Cash	405,662
Dialog RSUs	5,096
Deferred cash rights	6,130
Consideration	**416,888**

We have not yet completed the purchase price allocation for Adesto, with the following matters being among those outstanding: the recoverability of certain trade receivables; the assessment of certain product warranty claims; and the determination of the amount of Adesto's brought forward tax losses that will be available to be relieved against expected future taxable profits.

Trade and other receivables are stated after deducting US$1,035 for amounts that are not expected to be collected.

Identifiable intangible assets acquired included customer relationships (US$105,099), order backlog (US$532), developed technology (US$44,307), in-process research and development (US$3,222) and trade names (US$4,195).

We recognised provisional goodwill of US$318,875 on the acquisition of Adesto that is principally attributable to the benefits expected to be derived from the development of new technology and product offerings by Adesto in the future, the assembled workforce and the opportunities to cross-sell Adesto's products to Dialog's customers. None of the goodwill is deductible for tax purposes.

During 2020, Adesto contributed US$40,973 to the Group's revenue and a net loss of US$36,420 after taking into account purchase accounting adjustments. If we had acquired Adesto on 1 January 2020, we estimate that the Group's revenue for 2020 would have been US$29,354 higher at US$1,405,278 and its net income US$31,912 lower at US$52,583.

During 2020, we incurred transaction costs of US$9,027 in relation to the acquisition of Adesto (included within general and administrative expenses). We also paid US$7,791 in settlement of certain of Adesto's transaction costs.

Consideration payable for Creative Chips GmbH
We acquired Creative Chips on 31 October 2019.

Purchase price adjustment
On completion of the acquisition, we paid initial consideration of US$83,722 in cash, including US$3,722 in respect of Creative Chips' estimated cash, debt and working capital. In February 2020, we paid a purchase price adjustment of US$84 to the sellers reflecting Creative Chips' actual cash, debt and working capital on completion.

Contingent consideration
Additional consideration of up to US$23,000 in cash was payable contingent on Creative Chips' performance against revenue targets for 2020 and 2021 and the achievement of certain product development targets by the end of 2020. During 2020, it became apparent that one of the product development targets would not be met. We therefore reduced the contingent consideration liability to US$nil and recognised a corresponding credit of US$6,938 in profit or loss (within other operating income).

Consideration payable for FCI Inc.
We acquired FCI on 31 May 2019.

Purchase price adjustment
We paid consideration of US$54,155 in cash for FCI, including US$9,155 in respect of FCI's estimated cash and working capital. During the second quarter of 2020, we reduced our estimate of the purchase price adjustment receivable from the vendor by US$76 and recognised a corresponding increase in the goodwill arising on the acquisition. Since we are now beyond the measurement period, any further change in the purchase price adjustment will be recognised in profit or loss.

Consideration payable for Silego Technology Inc.
We acquired Silego on 1 November 2017.

Deferred consideration
On completion of the acquisition, unvested employee options were converted into deferred cash rights and the fair value of those rights was apportioned between a deferred consideration element and a future compensation element. During 2020, we paid US$924 in settlement of vested deferred consideration and recognised a credit of US$30 to profit or loss in respect of forfeitures. As at 31 December 2020, the remaining liability for the deferred consideration was US$19 that is expected to be settled during the first quarter of 2021.

Year ended 31 December 2019

Acquisition of Creative Chips GmbH
On 31 October 2019, we completed the acquisition of 100% of the equity interests in Creative Chips GmbH, a supplier of integrated circuits ("ICs") to the Industrial Internet of Things ("IIoT") market.

Headquartered near Frankfurt, Germany, with an additional design centre in Dresden, Germany, Creative Chips has a growing IC business supplying a broad portfolio of industrial ethernet and other mixed-signal products to manufacturers of industrial and building automation systems. Creative Chips has also developed a range of highly complementary standard IO-Link IC products, driving broader connectivity in the Industry 4.0 revolution.

We acquired Creative Chips for US$80,000 on a cash- and debt-free basis. Additional consideration of up to US$23,000 was payable contingent on Creative Chips' performance against revenue targets for 2020 and 2021 and the achievement of certain product development targets by the end of 2020.

On completion, we paid initial consideration of US$83,722 in cash, including US$3,722 in respect of Creative Chips' estimated cash, debt and working capital. We estimated that a purchase price adjustment of US$84 would be payable to the sellers reflecting Creative Chips' actual cash, debt and working capital levels on completion.

We paid US$15,070 of the initial consideration into an escrow fund that was available to settle any valid claims that we may have made in relation to the representations, warranties and indemnities that were provided to us by the sellers.

Additional consideration of up to US$23,000 in cash was payable in two instalments contingent on Creative Chips' performance against revenue targets for 2020 and 2021 and the achievement of certain product development targets by the end of 2020. At the acquisition date, we estimated that the amount of the first instalment payable in early 2021 would be in the range US$nil to US$10,210 and that the amount of the second instalment payable in early 2022 would be in the range US$nil to US$7,475. Using the expected value method, we estimated that the fair value of the contingent consideration at the acquisition date was US$6,517 (net of discounting of US$2,130).

We recognised goodwill of US$32,124 on the acquisition of Creative Chips that was principally attributable to the benefits expected to be derived from the growth potential of the IIoT market, the assembled workforce and the broadening of Dialog's customer base for its own mixed-signal business. None of the goodwill is deductible for tax purposes.

Acquisition of FCI Inc.
On 31 May 2019, we completed the acquisition of 100% of the equity interests in Silicon Motion Technology Corporation's Mobile Communications product group, branded as FCI.

FCI is based near Seoul, South Korea and is a leading supplier of Mobile TV SoCs and Low Power Wi-Fi SoCs. During the fourth quarter of 2018, began ramping production of its first Ultra-Low-Power Wi-Fi SoC that is designed to meet the demands of battery powered IoT devices, providing direct internet connectivity. FCI has been integrated into our Connectivity & Audio operating segment where we are combining its Ultra-Low-Power Wi-Fi technology with our own Bluetooth® low energy chips and modules, principally to enhance our IoT offerings.

We acquired FCI for US$45,000 on a cash- and debt-free basis. On completion, we paid consideration of US$53,884 in cash, including US$8,884 (net of US$271 transaction tax withheld) in respect of FCI's cash, debt and estimated working capital. We paid the withheld transaction tax to the Korean tax authority during the third quarter of 2019.

We paid US$5,400 of the consideration into an escrow fund that is available to settle any valid claims that we may make in relation to the representations, warranties and indemnities that were provided to us by the seller.

We initially estimated that a purchase price adjustment of US$203 would be payable by the seller, reflecting FCI's actual working capital on completion.

We initially recognised goodwill of US$9,929 on the acquisition of FCI that was principally attributable to the benefits expected to be derived from the development of new technology and product offerings by FCI in the future, the assembled workforce and the opportunities to cross-sell FCI's products to Dialog's customers. None of the goodwill is deductible for tax purposes.

Assets acquired and liabilities assumed
At their respective acquisition dates, we allocated the purchase consideration to the identifiable assets and liabilities of Creative Chips and FCI and goodwill as follows:

	Creative Chips US$000	FCI US$000	Total US$000
Assets acquired			
Cash and cash equivalents	**7,328**	**9,562**	**16,890**
Trade and other receivables	**2,235**	**1,791**	**4,026**
Inventories	**4,578**	**4,347**	**8,925**
Intangible assets	**51,278**	**34,396**	**85,674**
Property, plant and equipment – owned	**11,993**	**872**	**12,865**
Property, plant and equipment – leased	**–**	**762**	**762**
Other assets	**1,058**	**1,098**	**2,156**
Total assets acquired	**78,470**	**52,828**	**131,298**
Liabilities assumed			
Trade and other payables	**1,260**	**2,385**	**3,645**
Net defined benefit liability	**–**	**771**	**771**
Deferred tax liabilities	**15,974**	**3,597**	**19,571**
Other liabilities	**3,037**	**2,052**	**5,089**
Total liabilities	**20,271**	**8,805**	**29,076**
Net identifiable assets acquired	**58,199**	**44,023**	**102,222**
Goodwill arising on acquisition	**32,124**	**9,929**	**42,053**
Consideration	**90,323**	**53,952**	**144,275**

Purchase consideration was satisfied by:			
Cash paid on completion	**83,722**	**54,155**	**137,877**
Purchase price adjustment	**84**	**(203)**	**(119)**
Initial consideration	**83,806**	**53,952**	**137,758**
Contingent consideration	**6,517**	**–**	**6,517**
Consideration	**90,323**	**53,952**	**144,275**

Trade and other receivables were expected to be collected at their gross contractual amounts.

Identifiable intangible assets acquired comprised customer relationships, developed technology and know-how and trade names.

During 2019, we incurred transaction costs of US$4,040 in relation to the acquisition of Creative Chips and FCI (included within general and administrative expenses).

Consideration payable for Silego Technology Inc.

Deferred consideration
During 2019, we paid US$2,089 in settlement of vested deferred consideration and recognised a credit of US$116 to profit or loss in respect of forfeitures.

Contingent consideration
Additional consideration of up to US$30,400 was payable for the acquisition of Silego in two instalments contingent on Silego's revenues for 2017 and 2018. In February 2019, we paid US$16,730 in settlement of the amount of the second instalment of the contingent consideration that was attributable to the shares and vested options acquired and attributed the balance of that instalment of US$1,144 to the deferred cash rights.

Year ended 31 December 2018

Consideration payable for Silego Technology Inc.

Purchase price adjustment
On completion of the acquisition of Silego in November 2017, we paid initial consideration of US$290,508 in cash, including US$22,527 in respect of Silego's estimated cash, debt and working capital. During 2018, we paid

a purchase price adjustment of US$692 following the agreement with the vendors of Silego's cash, debt and working capital on completion.

Deferred consideration
During 2018, we paid US$2,788 in settlement of vested deferred consideration and recognised a credit of US$204 to profit or loss in respect of forfeitures.

Contingent consideration
Additional consideration of up to US$30,400 was payable for the acquisition of Silego in two instalments contingent on Silego's revenues for 2017 and 2018.

Silego's actual revenue for 2017 confirmed that the first instalment of the contingent consideration of US$10,000 was payable in full. In February 2018, we paid US$9,360 in settlement of the amount of the first instalment that was attributable to the shares and vested options acquired and attributed the balance of that instalment of US$640 to the deferred cash rights.

Silego's actual revenue for 2018 showed that US$17,874 was payable in settlement of the second instalment. Since Silego's actual revenue for 2018 was lower than our initial estimate, we recognised a credit of US$878 to profit or loss on remeasurement of the fair value of the contingent consideration.

Cash flows in relation to business combinations
During the years ended 31 December 2020, 2019 and 2018, the net cash outflow on the purchase of businesses was as follows:

	2020 US$000	2019 US$000	2018 US$000
Initial consideration	**405,662**	137,877	–
Purchase price adjustment	**84**	–	–
Deferred consideration	**6,868**	2,089	2,788
Contingent consideration	**–**	16,730	9,360
Consideration paid	**412,614**	156,696	12,840
Cash and cash equivalents acquired	**(4,749)**	(16,890)	–
Cash outflow on purchase of businesses, net of cash acquired	**407,865**	139,806	12,840

Contingent consideration paid in 2019 and 2018 in relation to the acquisition of Silego was below our estimate at the acquisition date and is therefore wholly included within cash flows from investing activities.

4. Licensing and asset transfer agreement

Summary of the transaction
On 11 October 2018, we announced that we had entered into an agreement with Apple Inc. ("Apple") to license our power management technologies and to transfer to Apple certain assets and over 300 employees from our design centres in the UK, Germany and Italy.

Following receipt of the necessary regulatory approvals and satisfaction of the other closing conditions, the transaction closed on 8 April 2019. Apple paid Dialog US$300,000 in respect of the licensing arrangements and asset transfers.

Pursuant to the agreement, Dialog granted to Apple:

- a perpetual licence over Dialog's Power Management IP as it existed at the closing date; and
- an effective licence over certain of Dialog's IP as it existed at the closing date and is developed for a period of at least four years thereafter.

Continuation of the effective licence beyond the initial four-year period is contingent on Apple's purchases from Dialog exceeding a specified level in successive preceding 12-month periods.

While there was no transfer of legal ownership of the licensed IP rights, a relatively small number of patents were included in the business assets transferred to Apple.

Following completion of the licensing and asset transfer agreement, Apple made an interest-free prepayment to Dialog of US$300,000. On initial recognition, we measured the prepayment at its fair value of US$288,584. We considered that the resulting "below market element" of the prepayment of US$11,416 represented additional consideration in respect of the licensing arrangements and asset transfers.

We allocated the consideration received in respect of the licensing and asset transfer arrangements as follows:

	US$000
Fair value at closing date	
Licensing arrangements:	
– Perpetual IP licence	**145,750**
– Effective IP licence	**136,400**
Design centre businesses	**29,266**
Total fair value	**311,416**
Consideration	
Cash received	**300,000**
Below market element of prepayment	**11,416**
Total consideration	**311,416**

We measured the fair value of the perpetual IP licence using the excess earnings method, whereby it represented the present value of the estimated future profits that were foregone by Dialog by licensing our existing Power Management IP.

We measured the fair value of the effective IP licence using the relief from royalty method, whereby it represented the present value of the estimated royalties that would have been payable by Apple over the term of the licence for the use of Dialog's IP in developing future generations of their products.

We measured the fair value of the design centre businesses as the present value of their estimated future cash flows based on applicable transfer prices.

We incurred transaction costs totalling US$23,851 in relation to the agreement with Apple, of which US$16,064 was recognised during 2019 and US$7,787 during 2018 (within general and administrative expenses).

Subsequent accounting for the transaction

Licensing arrangements
We consider that the perpetual IP licence granted Apple a "right to use" the related IP. We therefore recognised the consideration of US$145,750 allocated to the perpetual licence as revenue on the closing date.

We consider that the effective IP licence granted Apple a "right to access" the related IP. We are therefore recognising the consideration of US$136,400 allocated to the effective licence as revenue over the four-year period following the closing date. We are amortising the deferred revenue in proportion to the present value of the cash flows that supported the fair value of the effective licence at the closing date. During 2020, we recognised revenue of US$35,707 (2019: US$18,484) in relation to the effective licence.

Transfer of design centre businesses

We recognised a gain of US$15,898 on the transfer of the design centre businesses (within other operating income) that was calculated as follows:

	US$000
Carrying amount of assets transferred	
Cash and cash equivalents	**1,452**
Property, plant and equipment – owned	**13,824**
Property, plant and equipment – leased	**4,287**
Patents	**224**
Other assets	**369**
Total assets transferred	**20,156**
Carrying amount of associated liabilities	
Trade and other payables	**161**
Income tax payables	**119**
Lease liabilities	**4,440**
Provisions	**1,326**
Other liabilities	**1,051**
Total liabilities transferred	**7,097**
Net assets transferred	**13,059**
Currency translation loss transferred from equity	**309**
Gain on transfer of design centre businesses	**15,898**
Consideration received	**29,266**

Prepayment agreement

It was intended that the US$300,000 prepayment would be recouped by Apple against amounts payable to Dialog for the purchase of certain of our products over the three-year period ending on 31 March 2022. Settlement of the prepayment takes place in quarterly instalments in arrears such that US$200,000 was settled in the first year and US$50,000 will be settled in each of the second and third years. During each quarter, Apple settles our invoices on its normal payment terms. If, on a recoupment date, there is a shortfall of invoices outstanding against the scheduled recoupment amount, Apple may require us to settle the shortfall in cash or permit us to carry forward the shortfall for recoupment in the subsequent quarter.

During 2020, quarterly instalments totalling US$125,000 (2019: US$100,000) were settled by recoupment by Apple against invoices outstanding of US$112,083 (2019: US$79,655) and balancing cash payments by Dialog of US$12,917 (2019: US$20,345). As at 31 December 2020, the principal amount of the prepayment outstanding was US$75,000 (2019: US$200,000).

We account for the prepayment as a financial liability measured at amortised cost. As at 31 December 2020, the carrying amount of the liability was US$73,250 (2019: US$194,467). During 2020, we recognised an interest expense of US$3,783 (2019: US$ 5,884) in relation to the prepayment.

As a condition of the prepayment, we put in place a reducing letter of credit in favour of Apple for the outstanding principal amount. During 2020, we incurred related commitment fees of US$738 (2019: US$1,070) (within interest expense).

5. Operating profit

a) Revenue

Revenue may be analysed as follows:

	2020 US$000	2019 US$000	2018 US$000
Sale of products:			
– Sales direct to end-customers	**896,317**	1,045,774	1,144,371
– Sales to distributors	**437,344**	355,348	296,598
Total sale of products	**1,333,661**	1,401,122	1,440,969
Product and IP development services	**3,355**	–	–
Licensing agreements with Apple:			
– Perpetual licence fee	**–**	145,750	–
– Effective licence fee	**35,707**	18,484	–
Other licence fees and royalties	**3,201**	883	1,169
Total revenue	**1,375,924**	1,566,239	1,442,138

b) Operating expenses

Operating profit is stated after charging/(crediting):

	2020 US$000	2019 US$000	2018 US$000
Cost of inventories included in cost of sales	**658,533**	675,713	702,078
Write-down of inventories	**3,743**	11,133	5,643
Research and development costs expensed as incurred	**332,790**	320,127	331,550
Government incentives (deducted from research and development expenses)	**(6,930)**	(6,577)	(5,241)
Depreciation of property, plant and equipment – owned	**24,785**	27,155	31,455
Depreciation of property, plant and equipment – leased	**10,759**	12,456	–
Loss on disposal of fixed assets	**728**	4,444	923
Amortisation of intangible assets	**60,903**	52,233	49,130
Impairment of intangible assets	**44,900**	3,130	–
Lease rentals	**625**	993	12,450
Transaction costs	**9,145**	20,104	11,346
Costs of integrating acquired businesses	**6,490**	2,434	2,765
Cost-reduction initiatives	**2,406**	–	–

Amortisation of intangible assets was allocated as follows:

	2020 US$000	2019 US$000	2018 US$000
Cost of sales	**550**	550	592
Selling and marketing expenses	**24,803**	16,226	14,231
General and administrative expenses	**2,806**	2,377	2,348
Research and development expenses	**32,744**	33,080	31,959
Total	**60,903**	52,233	49,130

Impairment of intangible assets

During 2020, we recognised an impairment loss of US$44,900 against the provisional goodwill relating to Adesto (see note 14).

Lease rentals
Subsequent to the adoption of IFRS 16 *Leases* at the beginning of 2019, lease rentals represent payments that are not included in the measurement of lease liabilities (see note 17).

Transaction costs
Transaction costs comprise acquisition-related costs (see note 3) and other corporate transaction costs, including, in 2019 and 2018, costs relating to the licensing and asset transfer agreement with Apple (see note 4).

Cost-reduction initiatives
During 2020, we commenced a number of initiatives to reduce the Group's cost base in response to the Covid-19 pandemic and incurred related costs of US$2,406 (principally employee termination benefits).

c) Other operating (expense)/income
Other operating (expense)/income comprised:

	2020 US$000	2019 US$000	2018 US$000
Contributions to product development costs	**14,828**	21,872	2,298
Impairment of goodwill (note 14)	**(44,900)**	–	–
Change in estimate of contingent consideration (note 3)	**6,938**	–	878
Gain on transfer of design centre businesses	**–**	15,898	–
Rental and other income	**2,539**	1,635	–
Total	**(20,595)**	39,405	3,176

6. Employee information

Employment costs were as follows:

	2020 US$000	2019 US$000	2018 US$000
Wages and salaries	**245,442**	226,428	224,908
Social security costs	**33,756**	32,573	31,051
Share-based compensation	**58,630**	46,539	41,153
Compensation element of deferred cash rights	**7,482**	1,204	1,481
Defined contribution pension costs	**11,549**	11,529	12,609
Defined benefit pension costs	**628**	369	–
Total	**357,487**	318,642	311,202

Pension costs from defined contribution plans include costs for the state funded pension plan in Germany of US$2,514 (2019: US$2,819; 2018: US$3,853).

Compensation of key management personnel is set out in note 33.

The monthly average number of persons employed by the Group (including the Executive Director) during the year, analysed by category, was as follows:

	2020	2019	2018
Research and development	**1,293**	1,211	1,371
Production	**241**	211	184
Sales and marketing	**341**	296	272
Administration	**226**	203	200
Information technology	**63**	60	59
Total	**2,164**	1,981	2,086

7. Auditor's remuneration

Fees payable to the Company's auditor, Deloitte LLP, were as follows:

	2020 US$000	2019 US$000	2018 US$000
Assurance services			
Audit of the parent company and consolidated financial statements	**908**	755	629
Audit of subsidiaries	**899**	530	423
Other assurance services	**277**	158	150
Other services			
Services related to corporate finance transactions	**–**	225	–
Total	**2,084**	1,668	1,202

8. Finance income/(expense)

a) Interest income

	2020 US$000	2019 US$000	2018 US$000
Interest on bank deposits	**2,425**	9,919	5,619
Interest on money market funds	**3,605**	11,910	4,189
Other interest income	**56**	121	75
Total interest income	**6,086**	21,950	9,883

b) Interest expense

	2020 US$000	2019 US$000	2018 US$000
Interest on lease liabilities	**(2,062)**	(2,956)	–
Interest on income tax payable	**(499)**	–	–
Interest on finance leases and hire purchase contracts	**–**	–	(50)
Facility commitment fees	**(1,192)**	(1,506)	(452)
Amortisation of deferred facility arrangement costs	**(260)**	(295)	(315)
Unwinding of discount on contingent consideration (note 3)	**(272)**	(464)	(2,220)
Unwinding of discount on prepayment (note 4)	**(3,783)**	(5,884)	–
Unwinding of discount on provisions (note 23)	**(58)**	(60)	(70)
Other interest expense	**(47)**	(144)	(27)
Total interest expense	**(8,173)**	(11,309)	(3,134)

c) Other finance expense

	2020 US$000	2019 US$000	2018 US$000
Currency translation loss, net	**(2,620)**	(5,655)	(994)
Fair value loss on Energous warrants (note 18)	**(31)**	(1,434)	(10,853)
Amortisation of gain on initial measurement of Energous warrants (note 18)	**809**	1,584	1,584
Net interest expense on the net defined benefit liability (note 24)	**(43)**	(14)	–
Proceeds from sale of Arctic Sand shares	**–**	63	–
Total other finance expense	**(1,885)**	(5,456)	(10,263)

9. Income taxes

Income tax recognised in profit or loss

The components of the Group's income tax expense for the year were as follows:

	2020 US$000	2019 US$000	2018 US$000
Current tax			
United Kingdom	**(25,331)**	(41,617)	(15,896)
Foreign	**(22,424)**	(45,523)	(33,633)
Deferred tax			
United Kingdom	**1,572**	(90)	(321)
Foreign	**13,775**	3,644	(5,431)
Income tax expense	**(32,408)**	(83,586)	(55,281)

	2020 US$000	2019 US$000	2018 US$000
Current tax			
Current income tax charge	**(48,148)**	(88,252)	(45,587)
Adjustments in respect of prior years	**393**	1,112	(3,942)
Deferred tax			
Origination and reversal of temporary differences	**16,321**	4,953	(4,663)
Movement in deferred tax balances following intra-group reorganisation	**(2,054)**	(1,921)	(1,920)
Adjustments in respect of prior years	**1,080**	522	831
Income tax expense	**(32,408)**	(83,586)	(55,281)

Factors affecting the income tax expense for the year
The Group's income tax expense differed from the amount that would have resulted from applying the statutory rate of corporation tax in the UK to the Group's profit before income taxes for the reasons shown in the following table:

	2020 US$000	2019 US$000	2018 US$000
Profit before income taxes	**116,903**	385,038	196,193
Income tax expense at UK corporation tax rate of 19.0% (2019: 19.0%; 2018: 19.0%)	**(22,211)**	(73,157)	(37,277)
Effect of different foreign tax rates	**(310)**	(10,595)	(6,656)
Non-taxable income:			
– Reduction in contingent consideration liability	**1,318**	–	–
– Other non-taxable income	**1,466**	2,493	39
Non-deductible expenses:			
– Impairment of goodwill	**(9,429)**	–	–
– Transaction costs	**(1,332)**	(2,395)	(1,131)
– Non-deductible portion of share-based compensation	**(12,971)**	(10,559)	(9,336)
– Other non-deductible expenses	**(5,135)**	(2,996)	(3,232)
Tax benefit from share-based compensation	**7,646**	6,494	1,997
Tax benefit from Intellectual Property and research and development incentives	**6,026**	10,323	8,633
Write-down of previously recognised deferred tax assets	**–**	–	(1,015)
Benefit from previously unrecognised deferred tax assets	**1,277**	82	70
Additional tax losses for which no deferred tax asset is recognised	**(638)**	(127)	(117)
Movement in deferred tax balances following intra-group reorganisation	**(2,054)**	(1,921)	(1,920)
Differences arising from different functional and tax currencies	**1,349**	(2,536)	(2,065)
Adjustments in respect of prior years	**1,473**	1,635	(3,111)
Effect of change in tax rates	**718**	–	–
Other items	**399**	(327)	(160)
Income tax expense	**(32,408)**	(83,586)	(55,281)

The Group's income tax expense for 2020 was US$32,408 (2019: US$83,586; 2018: US$55,281), an effective tax rate for the year of 27.7% (2019: 21.7%; 2018: 28.2%).

Our effective tax rate is sensitive to the geographic mix of the Group's profits and reflects a combination of different tax rates in different countries, in particular higher tax rates in Germany. Our effective tax rate can also be affected by changes in tax legislation and tax rates, the impact of acquisitions, disposals and restructurings and currency exchange rate movements, which give rise to tax effects where an entity's functional currency differs from the currency in which it is required to calculate and pay income taxes.

Our effective tax rate is reduced because a large proportion of the Group's research and development activities are undertaken in the UK and the Netherlands and we are therefore able to benefit from the UK and Netherlands tax regimes that provide incentives for innovation.

Factors affecting the income tax expense in future years
Factors that may affect the Group's future tax expense include foreign exchange rate movements, changes in tax legislation and tax rates, the impact of acquisitions, disposals and restructurings and the resolution of open issues with tax authorities. Incentives for innovation available under the UK and Netherlands tax regimes are limited by reference to the location of the Group's research and development activities. Given the global nature of the Group's research and development activities, this may also affect the Group's future tax expense.

We maintain provisions for potential tax liabilities where uncertainty exists concerning the amount of current or deferred tax recognised. Due to the complexity of tax laws and their interpretation, the amounts ultimately agreed with tax authorities in respect of these uncertainties may differ materially from the amounts provided and may therefore affect the Group's income tax expense in future periods. In January 2016, we received a termination fee of US$137,300 from Atmel Corporation, Inc. following their termination of the merger agreement that existed between us. We obtained tax advice that the termination fee should not be taxable in the UK and therefore did not recognise a tax expense in relation to the termination fee. Examination of the tax treatment of the termination fee by the UK tax authority is ongoing. We maintain our position that no tax liability should arise in respect of the termination fee.

International tax reform remains a key focus of attention, including the OECD's Base Erosion & Profit Shifting project, the EU's action plan for fair and efficient corporate taxation and US tax reform. We continually monitor developments and assess the potential impact for Dialog of such initiatives. We have concluded that current or announced future tax law changes as a result of such initiatives give rise to no changes to the principal risks for Dialog.

Income tax recognised outside profit or loss

Income tax recognised in other comprehensive income was as follows:

	2020 US$000	2019 US$000	2018 US$000
Items that may be reclassified to profit or loss			
Currency translation differences on foreign operations:			
– Current tax (expense)/credit	**370**	(91)	(78)
Equity investments:			
– Deferred tax credit/(expense)	**–**	–	1,015
Cash flow hedges:			
– Current tax (expense)/credit	**(1,427)**	(1,065)	2,376
Items that will not be reclassified to profit or loss			
Remeasurements of net defined benefit liability:			
– Deferred tax (expense)/credit	**(46)**	146	–
Income tax (charged)/credited to other comprehensive income	**(1,103)**	(1,010)	3,313

Income tax recognised directly in equity was as follows:

	2020 US$000	2019 US$000	2018 US$000
Share-based compensation:			
– Current tax credit	**1,807**	2,183	281
– Deferred tax credit	**546**	3,257	64
Total tax credited directly to equity	**2,353**	5,440	345

Deferred tax

Analysis of movement in the net deferred tax balance during the year:

	US$000
As at 31 December 2018	(1,924)
Currency translation differences	(330)
Recognised in income	3,554
Recognised in other comprehensive income	146
Recognised in equity	3,297
Transfer to current tax	(19,571)
As at 31 December 2019	(14,828)
Currency translation differences	**603**
Recognised in income	**15,347**
Recognised in other comprehensive income	**(46)**
Recognised in equity	**546**
Transfer from current tax	**237**
Acquisition of businesses	**4,789**
As at 31 December 2020	**6,648**

Deferred income tax assets and liabilities, before offset of balances within countries, are as follows:

	Amount credited/ (charged) to profit or loss		Net recognised deferred tax asset/(liability)	
	2020 US$000	2019 US$000	**As at 31 December 2020 US$000**	As at 31 December 2019 US$000
Temporary differences relating to intangible assets	**8,942**	3,668	**(66,729)**	(43,507)
Temporary differences relating to share-based compensation	**3,038**	1,626	**14,826**	11,252
Other temporary differences	**2,730**	636	**13,522**	1,276
Deferred taxes in relation to tax credits	**962**	532	**16,125**	13,893
Net operating loss carryforwards	**(325)**	(2,908)	**28,904**	2,258
Total	**15,347**	3,554	**6,648**	(14,828)

Deferred tax assets and liabilities are analysed in the consolidated balance sheet, after offset of balances within countries, as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Deferred tax assets	**18,790**	8,242
Deferred tax liabilities	**(12,142)**	(23,070)
Recognised net deferred tax assets/(liabilities)	**6,648**	(14,828)

Tax loss carryforwards, temporary differences and net deferred tax assets are summarised as follows:

	As at 31 December 2020			As at 31 December 2019		
	Tax loss carryforwards US$000	**Temporary differences US$000**	**Net deferred tax assets/(liabilities) US$000**	Tax loss carryforwards US$000	Temporary differences US$000	Net deferred tax assets/(liabilities) US$000
Germany	**–**	**(41,483)**	**(12,141)**	–	(51,657)	(15,621)
United Kingdom	**2,942**	**34,934**	**6,637**	9,546	30,886	5,063
Netherlands	**–**	**7,769**	**1,942**	–	1,111	1,111
USA	**115,491**	**(115,736)**	**11,411**	–	(48,627)	1,942
Other	**39,091**	**(35,390)**	**(1,201)**	24,593	(19,788)	(7,323)
Total	**157,524**	**(149,906)**	**6,648**	34,139	(88,075)	(14,828)

In assessing whether the deferred tax assets can be used, management considers the probability that some, or all, of the deferred tax assets will not be realised. The utilisation of deferred tax assets depends upon generating taxable profit during the periods in which those temporary differences become deductible or tax-loss carryforwards can be utilised. Management considers the reversal of deferred tax liabilities, projected future taxable income, benefits that could be realised from available tax planning strategies and other positive and negative factors in making this assessment.

Deferred tax continued

As at 31 December 2020, deferred tax assets were not recognised for tax loss carryforwards of US$18,014 (2019: US$23,873) and tax credits of US$10,856 (2019: US$10,490) in respect of which there is expected to be insufficient future taxable profit and therefore utilisation is not probable. Unrecognised tax loss carryforwards of US$2,942 (2019: US$9,546) have no expiration date. Tax losses in Taiwan of US$15,072 (2019: US$14,327) expire between 2025 and 2029. The tax credits expire between 2021 and 2040.

As at 31 December 2020, the aggregate amount of temporary differences associated with undistributed earnings of subsidiaries for which deferred tax liabilities have not been recognised was US$267,041 (2019: US$111,542). We do not expect a liability to arise in respect of these differences because the Company is in a position to control the timing of the reversal of the temporary differences and it is probable that such differences will not reverse in the foreseeable future.

10. Earnings per share

Basic earnings per share amounts are calculated by dividing the profit for the year attributable to holders of ordinary shares in the Company by the weighted average number of ordinary shares outstanding during the year.

Diluted earnings per share amounts are calculated by dividing the profit attributable to holders of ordinary shares in the Company by the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued if all the securities or other contracts to issue ordinary shares were exercised.

Profit attributable to shareholders in the Company and the weighted average number of ordinary shares for calculating basic and diluted earnings per share were calculated as follows:

	2020 US$000	2019 US$000	2018 US$000
Profit attributable to shareholders in the Company			
For calculating basic and diluted earnings per share	**84,495**	301,452	139,799
Weighted average number of ordinary shares			
Shares in issue at the beginning of the period	**76,382,139**	76,382,139	76,382,139
Effect on average number of shares during the period:			
– Shares issued to employee benefit trust	**2,093,151**	–	–
– Cancellation of treasury shares	**(2,301,096)**	–	–
Average number of shares in issue during the period	**76,174,194**	76,382,139	76,382,139
Deduct:			
Average number of shares held by employee benefit trusts	**(2,473,960)**	(1,759,457)	(2,422,787)
Average number of treasury shares	**(5,648,962)**	(2,726,643)	–
For calculating basic earnings per share	**68,051,272**	71,896,039	73,959,352
Add:			
Average number of dilutive share options and awards	**4,187,868**	4,284,926	3,695,214
For calculating diluted earnings per share	**72,239,140**	76,180,965	77,654,566
Earnings per share (US$)			
Basic	**1.24**	4.19	1.89
Diluted	**1.17**	3.96	1.80

During 2020, the average number of anti-dilutive share options outstanding was 400,187 (2019: 486,253; 2018: 830,300).

11. Cash and cash equivalents

Cash and cash equivalents were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Cash at bank	**24,315**	21,056
Cash available from receivables financing facilities	**74,232**	65,439
Bank deposits	**170,000**	350,000
Money market funds	**254,000**	582,000
Cash held by employee benefit trusts	**1,333**	6,049
Total	**523,880**	1,024,544

Bank deposits are made for varying periods of up to three months.

As at 31 December 2020 and 2019, no amounts had been drawn from the cash available from receivables financing facilities.

12. Trade and other receivables

Trade and other receivables were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Trade accounts receivable	**107,512**	122,528
Retentions under receivables financing facilities	**13,117**	11,551
Total	**120,629**	134,079

Trade accounts receivable are generally on 30 to 60-day credit terms. Trade accounts receivable are regularly reviewed for collectability and an allowance is established for doubtful accounts against which receivables are written-off when they are no longer considered to be collectable.

Movements on the allowance for doubtful accounts were as follows:

	2020 US$000	2019 US$000
At the beginning of the year	**79**	21
Allowances charged to profit or loss	**68**	58
Releases credited to profit or loss	**(52)**	–
At the end of the year	**95**	79

13. Inventories

Inventories were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Raw materials	21,749	31,938
Work in progress	72,426	44,097
Finished goods	65,218	46,589
Total	**159,393**	**122,624**

14. Goodwill

Movements on goodwill during the years ended 31 December 2020 and 2019 were as follows:

	2020 US$000	2019 US$000
Carrying amount		
At the beginning of the year	**482,134**	439,508
Acquisition of Adesto* (note 3)	**318,875**	–
Acquisition of FCI	**76**	9,929
Acquisition of Creative Chips	**–**	32,124
Impairment of Adesto goodwill	**(44,900)**	–
Currency translation differences	**653**	573
At the end of the year**	**756,838**	482,134

* Provisional goodwill.

** At the end of 2020, the carrying amount of goodwill was stated net of an impairment loss of US$44,900 (end of 2019: US$nil).

Goodwill is monitored by management at the level of the Group's operating segments and is therefore allocated at that level. For the first three months following its acquisition, we managed Adesto on a stand-alone basis and reported it as a separate operating segment. We allocated the provisional goodwill recognised on the acquisition wholly to the Adesto operating segment. During the fourth quarter of 2020, we reorganised the Group's internal reporting structure, bringing together Adesto and the Industrial Mixed Signal business unit to form a single new operating segment, named Industrial IoT. At the year end, goodwill was allocated to four operating segments as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Carrying amount		
Custom Mixed Signal business group	**107,163**	107,163
Advanced Mixed Signal	**244,147**	244,147
Connectivity & Audio	**99,104**	98,375
Industrial IoT*	**306,424**	32,449
Total	**756,838**	482,134

* Comparative figure for the former Industrial Mixed Signal business unit.

Impairment tests carried out during the year
Goodwill is tested for impairment annually and whenever there is an indication that it may be impaired. Goodwill is tested for impairment at the level of the operating segments to which it is allocated. Goodwill is impaired if the carrying amount of the operating segment to which it is allocated exceeds its recoverable amount. Goodwill impairment tests conducted during 2020 measured the recoverable amount on a value in use basis. Value in use represents the present value of the future cash flows expected to be generated by the assets allocated to each operating segment in their current use and condition.

Impairment of Adesto goodwill
We agreed the purchase consideration for Adesto in early February 2020 based on profit forecasts for the business that were prepared before the extent of the impact of the Covid-19 pandemic could be predicted. By the time we completed the acquisition in late June 2020, it had become clear that the forecasts would have to be scaled back to reflect the impact of the pandemic, particularly in Adesto's industrial markets. We based the provisional purchase price allocation on our revised forecasts, projected over a ten-year period in order to capture the long-term growth potential of the business.

Following completion of the acquisition, there was an increase in the discount rate applicable to Adesto's forecast cash flows that caused us to perform an impairment test on the carrying amount of Adesto at the end of the third quarter of 2020. We concluded that the carrying amount was impaired and recognised an impairment loss of US$44,900 against the provisional goodwill relating to Adesto.

Annual goodwill impairment tests
In measuring value in use, expected future cash flows in the first three years were based on the Group's Strategic Plan 2021-2023. Except in the case of Industrial IoT, cash flows beyond the third year were estimated by applying a perpetuity growth factor to the forecast cash flow in the third year. We expect that the strong growth potential of Industrial IoT will take considerably longer than three years to be fully realised. We therefore based its expected future cash flows beyond the third year on profit forecasts for a further seven years and applied a perpetuity growth factor to the forecast cash flow in the tenth year.

We consider that the key assumptions used in determining value in use are the expected compound annual growth of revenue ("revenue CAGR") during the forecast period, the perpetuity growth rate and the applicable discount rate.

Impairment tests carried out during the year continued
Expected future revenue of each operating segment is based on external forecasts of the future volume of the end-markets for the operating segment's products adjusted to reflect factors specific to the operating segment such as its customer base and available distribution channels, the possibility of new entrants to the market and future technological developments. Cash flows during the forecast period also reflect the cost of materials and other direct costs, research and development expenditure and selling, general and administrative expenses. We estimated the cost of materials and other direct and indirect costs based on current prices and market expectations of future price changes.

We applied a perpetuity growth rate of 2% per annum in estimating the future cash flows of each operating segment in both 2020 and 2019, which we consider to be the long-term growth rate in the demand for the products of each operating segment in its end-markets.

Discount rates applied to the cash flow projections were determined using a capital asset pricing model and reflected current market interest rates, relevant equity and size risk premiums and the risks specific to the operating segment concerned. Pre-tax discount rates used were as follows:

	2020	2019
Pre-tax discount rate		
Custom Mixed Signal business group	**12.6%**	13.1%
Advanced Mixed Signal	**13.0%**	13.7%
Connectivity & Audio	**14.3%**	13.9%
Industrial IoT*	**13.0%**	19.1%

* Comparative figure for the former Industrial Mixed Signal business unit.

With the exception of Industrial IoT, the recoverable amount of each operating segment to which goodwill is allocated was comfortably in excess of its carrying amount. Our calculations showed that Industrial IoT's recoverable amount exceeded its carrying amount by US$105,534. We consider that the recoverable amount is most sensitive to a reasonably possible change in the revenue CAGR over the ten-year forecast period or in the applicable discount rate. Our calculations reflect a revenue CAGR of 13.4% over the forecast period. Assuming the other key assumptions remain unchanged, we estimate that the recoverable amount would equal the carrying amount if the revenue CAGR was to fall to 11.4% over the forecast period or if the pre-tax discount rate was to increase from 13.0% to 14.9%.

15. Other intangible assets

Movements on other intangible assets during the years ended 31 December 2020 and 2019 were as follows:

	Acquired customer-related assets US$000	Software, licences and other US$000	Patents US$000	Product development assets US$000	Total US$000
Cost					
As at 31 December 2018	172,875	82,617	22,998	206,541	485,031
Acquisition of businesses	56,012	4,075	(205)	25,792	85,674
Additions	–	6,691	1,746	15,384	23,821
Reclassifications	–	543	137	(680)	–
Disposals	–	(265)	(1,099)	(390)	(1,754)
Currency translation differences	798	223	9	581	1,611
As at 31 December 2019	229,685	93,884	23,586	247,228	594,383
Acquisition of businesses	**105,631**	**4,783**	**–**	**47,529**	**157,943**
Additions	**–**	**5,824**	**1,892**	**13,746**	**21,462**
Disposals	**–**	**(7,050)**	**(488)**	**(74)**	**(7,612)**
Currency translation differences	**841**	**448**	**26**	**1,166**	**2,481**
As at 31 December 2020	**336,157**	**97,889**	**25,016**	**309,595**	**768,657**
Amortisation and impairment losses					
As at 31 December 2018	(63,099)	(70,290)	(11,832)	(122,365)	(267,586)
Amortisation charge for the year	(15,524)	(4,559)	(2,246)	(29,904)	(52,233)
Impairment	–	–	–	(3,130)	(3,130)
Disposals	–	6	811	–	817
Currency translation differences	(16)	(138)	(15)	(14)	(183)
As at 31 December 2019	(78,639)	(74,981)	(13,282)	(155,413)	(322,315)
Amortisation charge for the year	**(23,673)**	**(5,633)**	**(2,229)**	**(29,368)**	**(60,903)**
Disposals	**–**	**6,154**	**334**	**36**	**6,524**
Currency translation differences	**(319)**	**(331)**	**(45)**	**(278)**	**(973)**
As at 31 December 2020	**(102,631)**	**(74,791)**	**(15,222)**	**(185,023)**	**(377,667)**
Carrying amount					
As at 31 December 2019	**151,046**	**18,903**	**10,304**	**91,815**	**272,068**
As at 31 December 2020	**233,526**	**23,098**	**9,794**	**124,572**	**390,990**

16. Property, plant and equipment – owned

Movements on owned property, plant and equipment during the years ended 31 December 2020 and 2019 were as follows:

	Buildings US$000	Test equipment US$000	Leasehold improvements US$000	Furniture, fittings and equipment US$000	Construction in progress US$000	Total US$000
Cost						
As at 31 December 2018	–	177,035	22,794	93,889	2,071	295,789
Acquisition of businesses	6,356	4,181	215	2,113	–	12,865
Additions	–	5,660	1,583	5,566	1,366	14,175
Reclassifications	–	40	134	989	(1,163)	–
Disposals	–	(4,861)	(915)	(5,350)	(1,113)	(12,239)
Currency translation differences	75	131	–	154	–	360
As at 31 December 2019	6,431	182,186	23,811	97,361	1,161	310,950
Acquisition of businesses	**–**	**–**	**1,998**	**2,866**	**–**	**4,864**
Additions	**–**	**11,762**	**627**	**6,535**	**486**	**19,410**
Reclassifications	**–**	**90**	**22**	**186**	**(298)**	**–**
Disposals	**–**	**(13,862)**	**(541)**	**(1,019)**	**(7)**	**(15,429)**
Currency translation differences	**–**	**1,010**	**283**	**175**	**6**	**1,474**
As at 31 December 2020	**6,431**	**181,186**	**26,200**	**106,104**	**1,348**	**321,269**
Depreciation and impairment losses						
As at 31 December 2018	–	(144,081)	(16,290)	(69,059)	–	(229,430)
Depreciation charge for the period	(35)	(12,268)	(3,335)	(11,517)	–	(27,155)
Disposals	–	3,716	129	3,120	–	6,965
Currency translation differences	(10)	(100)	7	(89)	–	(192)
As at 31 December 2019	(45)	(152,733)	(19,489)	(77,545)	–	(249,812)
Depreciation charge for the period	**(205)**	**(11,270)**	**(3,043)**	**(10,267)**	**–**	**(24,785)**
Disposals	**–**	**13,861**	**453**	**855**	**–**	**15,169**
Currency translation differences	**(2)**	**(996)**	**(192)**	**77**	**–**	**(1,113)**
As at 31 December 2020	**(252)**	**(151,138)**	**(22,271)**	**(86,880)**	**–**	**(260,541)**
Carrying amount						
As at 31 December 2019	6,386	29,453	4,322	19,816	1,161	61,138
As at 31 December 2020	**6,179**	**30,048**	**3,929**	**19,224**	**1,348**	**60,728**

17. Property, plant and equipment – leased

Background

With the exception of two properties acquired with Creative Chips in 2019, the Group leases all of its product development and office facilities in the various countries in which it operates.

Property leases that have been entered into by the Group contain varied terms and conditions reflecting its business requirements and local market practices. Property leases are typically for a fixed term of approximately five years but may include extension or early termination options to provide operational flexibility. Property rentals are typically fixed on inception of the lease but may be subject to review to reflect changes in market rental rates.

The Group also leases office and other equipment.

At the beginning of 2019, the Group had a contract with a supplier that contained an embedded lease over certain production equipment. During 2019, the contract was terminated by mutual agreement. At the time of termination, the carrying amount of the related right-of-use asset was US$9,956 and the lease liability was US$10,851. Accordingly, the Group recognised a gain on termination of US$895 in profit or loss.

Right-of-use assets

Movements on right-of-use assets in relation to leased property, plant and equipment during the years ended 31 December 2020 and 2019 were as follows:

	Buildings US$000	Office and other equipment US$000	Total US$000
Cost			
As at 1 January 2019	52,873	13,517	66,390
Acquisition of businesses	757	5	762
Additions	1,015	426	1,441
Disposal of businesses (note 4)	(4,287)	–	(4,287)
Terminations	(105)	(13,139)	(13,244)
Other changes in lease payments	(285)	–	(285)
Currency translation differences	52	1	53
As at 31 December 2019	50,020	810	50,830
Acquisition of businesses	**6,557**	**–**	**6,557**
Additions	**3,126**	**–**	**3,126**
Terminations	**(1,539)**	**(112)**	**(1,651)**
Other changes in lease payments	**(72)**	**(21)**	**(93)**
Currency translation differences	**919**	**37**	**956**
As at 31 December 2020	**59,011**	**714**	**59,725**
Accumulated depreciation			
As at 1 January 2019	–	–	–
Depreciation charge for the period	(9,181)	(3,275)	(12,456)
Terminations	47	3,037	3,084
Currency translation differences	(35)	–	(35)
As at 31 December 2019	(9,169)	(238)	(9,407)
Depreciation charge for the period	**(10,454)**	**(305)**	**(10,759)**
Terminations	**1,281**	**55**	**1,336**
Currency translation differences	**(271)**	**(22)**	**(293)**
As at 31 December 2020	**(18,613)**	**(510)**	**(19,123)**
Carrying amount			
As at 31 December 2019	40,851	572	41,423
As at 31 December 2020	**40,398**	**204**	**40,602**

Lease liabilities

Movements on the lease liabilities recognised in relation to leased property, plant and equipment during the years ended 31 December 2020 and 2019 were as follows:

	2020 **US$000**	2019 US$000
At the beginning of the year	**43,044**	67,631
Acquisition of businesses	**6,557**	699
Additions	**3,127**	1,411
Disposals of businesses (note 4)	**–**	(4,440)
Terminations	**(249)**	(10,845)
Other changes in lease payments	**(35)**	(280)
Covid-19-related rent concessions	**(252)**	–
Lease payments during the period	**(11,796)**	(14,042)
Interest expense for the period	**2,062**	2,956
Currency translation differences	**1,666**	(46)
At the end of the year	**44,124**	43,044

Lease liabilities were presented in the balance sheet as follows:

	2020 **US$000**	2019 US$000
Amounts falling due:		
– Within one year	**11,767**	8,972
– After more than one year	**32,357**	34,072
Total lease liabilities	**44,124**	43,044

Expenses recognised in relation to lease payments that were not included in the measurement of lease liabilities were as follows:

	2020 **US$000**	2019 US$000
Expense relating to short-term leases	**(200)**	(167)
Expense relating to leases of low value assets	**(256)**	(180)
Expense relating to variable lease payments not included in lease liabilities	**(169)**	(343)

Cash outflow on lease payments

The total cash outflow on lease payments was as follows:

	2020 **US$000**	2019 US$000
Lease payments included in lease liabilities	**(11,796)**	(14,042)
Variable lease payments not included on lease liabilities	**(202)**	(328)
Lease payments on short-term leases	**(467)**	(167)
Lease payments on leases of low value assets	**(256)**	(180)
Total cash outflow on lease payments	**(12,721)**	(14,717)

18. Investments

Investments were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Equity investments:		
– Energous shares	**3,132**	3,079
– Semitech shares	**401**	–
Derivative financial instruments:		
– Energous warrants	**–**	31
Total investments	**3,533**	3,110

Energous shares and warrants

In November 2016, we entered into a strategic alliance with Energous Corporation ("Energous") the developer of WattUp®, a wire-free charging technology. At that time, the Company subscribed for 763,552 common shares in Energous and was granted warrants to purchase up to 763,552 common shares that were exercisable in full or in part on a cashless basis at any time between May 2017 and November 2019. We initially recognised the warrants at their grant date fair value of US$4,695 and an equivalent deferred credit within non-current liabilities. We will amortise the deferred credit to profit or loss in relation to the royalties that may be payable for the use of Energous' Intellectual Property over the initial seven-year term of the strategic alliance. Amortisation of the deferred credit has not yet commenced.

On 5 July 2017, the Company subscribed for a further 976,139 common shares in Energous and was granted a second tranche of warrants to purchase up to 654,013 common shares that were exercisable in full or in part on a cashless basis at any time between January 2018 and July 2020. We initially recognised the second tranche of the warrants at their grant date fair value of US$4,753 and an equivalent deferred credit within non-current liabilities. We amortised the deferred credit to profit or loss over the three-year period from the grant date to the expiry of the warrants.

As at 31 December 2020, we held an equity interest of approximately 2.8% in Energous following the expiry of all of the warrants that we held.

During 2020, we recognised a fair value gain on the shares of US$53 (2019: loss of US$6,994; 2018: loss of US$23,764) in other comprehensive income and recognised a fair value loss of US$31 (2019: US$1,434; 2018: US$10,853) on the warrants in profit or loss (as other finance expense). Also during 2020, we recognised a credit of US$809 (2019: US$1,584; 2018: US$1,584) in profit or loss on the amortisation of the fair value on initial recognition of the second tranche of the warrants (as other finance income).

Semitech shares

We acquired an equity interest of approximately 11.8% in Semitech Semiconductor Pty Ltd ("Semitech") with the acquisition of Adesto. Semitech is headquartered in Melbourne, Australia and provides semiconductor devices that transform homes into energy-aware ("smart homes"). Semitech's shares are unlisted and are measured at fair value through other comprehensive income. We consider that there was no appreciable change in the fair value of the shares between the acquisition date and the end of 2020.

19. Other financial assets

Other financial assets were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Current		
Restricted cash	**890**	–
Currency derivatives	**7,586**	1,056
Total current	**8,476**	**1,056**
Non-current		
Rental and other deposits	**2,263**	2,202
Total	**10,739**	3,258

20. Other assets

Other assets were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Current		
Prepaid expenses	**7,593**	7,775
Contract assets	**2,319**	–
Other tax receivables	**4,021**	3,369
Deferred facility arrangement costs	**231**	231
Other assets	**3,842**	11,157
Total current	**18,006**	**22,532**
Non-current		
Deferred facility arrangement costs	**3,701**	780
Total	**21,707**	23,312

21. Trade and other payables

Trade and other payables were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Trade accounts payable	**129,155**	88,148
Other payables	**22,692**	16,472
Total	**151,847**	104,620

Trade accounts payable are non-interest bearing and are normally settled on 30 to 60-day terms. Other payables are non-interest bearing and have a term of less than three months.

22. Other financial liabilities

Other financial liabilities were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Current		
Currency derivatives in designated hedging relationships	**715**	1,324
Prepayment from Apple	**48,381**	121,217
Bank loans	**697**	794
Deferred consideration	**106**	1,038
Total current	**49,899**	124,373
Non-current		
Prepayment from Apple	**24,869**	73,250
Bank loans	**452**	1,022
Deferred consideration	**58**	25
Contingent consideration	**–**	6,666
Total non-current	**25,379**	80,963
Total	**75,278**	205,336

Changes in liabilities arising from financing activities were as follows:

	Prepayment from Apple (note 4) US$000	Bank and other loans US$000	Lease liabilities (note 17) US$000	Share buyback obligation (note 27) US$000	Derivatives hedging share buyback obligation US$000	Total US$000
As at 31 December 2017	–	–	1,651	–	–	1,651
Changes from financing cash flows	–	–	(1,651)	–	–	(1,651)
Changes in fair value	–	–	–	–	301	301
Other movements	–	–	–	171,173	–	171,173
Currency translation differences	–	–	–	590	–	590
As at 31 December 2018	–	–	–	171,763	301	172,064
Adjustment on initial application of IFRS 16	–	–	67,631	–	–	67,631
Acquisition of businesses	–	1,952	699	–	–	2,651
Disposal of businesses	–	–	(4,440)	–	–	(4,440)
Changes from financing cash flows	268,239	(156)	(11,086)	(251,774)	(11,625)	(6,402)
Recoupment against trade receivables	(79,656)	–	–	–	–	(79,656)
Changes in fair value	–	–	–	–	11,324	11,324
Other movements	5,884	–	(9,714)	86,718	–	82,888
Currency translation differences	–	20	(46)	(6,708)	–	(6,734)
As at 31 December 2019	194,467	1,816	43,044	–	–	239,326
Acquisition of businesses	**–**	**–**	**6,557**	**–**	**–**	**6,557**
Changes from financing cash flows	**(12,917)**	**(697)**	**(9,734)**	**(80,500)**	**1,503**	**(102,345)**
Recoupment against trade receivables	**(112,083)**	**–**	**–**	**–**	**–**	**(112,083)**
Changes in fair value	**–**	**–**	**–**	**–**	**(1,503)**	**(1,503)**
Other movements	**3,783**	**–**	**2,591**	**78,219**	**–**	**84,593**
Currency translation differences	**–**	**30**	**1,666**	**2,281**	**–**	**3,977**
As at 31 December 2020	**73,250**	**1,149**	**44,124**	**–**	**–**	**118,522**

23. Provisions

Movements on provisions were as follows:

	Product warranties US$000	Leasehold property US$000	Severance costs US$000	Other provisions US$000	Total US$000
As at 31 December 2018	2,713	3,122	1,602	894	8,331
Additions charged to profit or loss	923	228	700	600	2,451
Utilised during the year	(2,377)	–	(18)	(44)	(2,439)
Releases credited to profit or loss	–	(263)	–	(850)	(1,113)
Unwinding of discount	–	60	–	–	60
Currency translation differences	–	10	(36)	–	(26)
As at 31 December 2019	1,259	3,157	2,248	600	7,264
Acquisition of businesses	**238**	**–**	**–**	**326**	**564**
Additions charged to profit or loss	**852**	**66**	**8,357**	**131**	**9,406**
Utilised during the year	**(832)**	**(78)**	**(5,810)**	**(190)**	**(6,910)**
Releases credited to profit or loss	**(12)**	**(4)**	**(126)**	**–**	**(142)**
Unwinding of discount	**–**	**58**	**–**	**–**	**58**
Currency translation differences	**5**	**154**	**136**	**–**	**295**
As at 31 December 2020	**1,510**	**3,353**	**4,805**	**867**	**10,535**

Provisions are presented in the Group's balance sheet as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Current liabilities	**6,945**	4,162
Non-current liabilities	**3,590**	3,102
Total	**10,535**	7,264

Product warranties
Dialog provides contractual product warranties under which it guarantees the performance of its products. Product warranty provisions are based on historical warranty data and are expected to be utilised within one year of the balance sheet date.

Leasehold property
Provision is made for the costs of restoring leasehold properties to their original condition at the end of the lease. Such provisions are expected to be utilised at the end of the relevant leases, which expire up to five years from the balance sheet date.

Severance costs
Severance provisions include termination benefits of US$2,209 in relation to the Group's cost-reduction initiatives and the integration of Adesto that are expected to be utilised within one year of the balance sheet date. Other severance provisions are for contractual amounts payable to employees in certain countries when they leave the Group's employment.

24. Pension schemes

a) Defined contribution plans
The Group operates defined contribution pension schemes in most of the countries in which it operates. Contributions payable by the Group to the plans amounted to US$9,000 (2019: US$8,710; 2018: US$8,756). As at 31 December 2020, the Group had not paid over to the plans contributions due amounting to US$2,189 (2019: US$1,567; 2018: US$1,596). All contributions due for the period were paid over subsequent to the balance sheet date. Pension costs also include payments to the state funded pension plan in Germany in the amount of US$2,514 (2019: US$2,819; 2018: US$3,853).

b) Defined benefit plan
Prior to the acquisition of FCI in May 2019, the Group had no defined benefit plans. FCI operates a funded defined benefit pension plan in South Korea, that provides participating employees with a lump sum benefit on

retirement that is based on the individual's career average salary, annual bonus and average allowance and length of service. The net defined benefit liability recognised in the Group's balance sheet is based on an actuarial valuation of the plan that was carried out by an independent qualified actuary as at 31 December 2020.

Analysis of the net defined benefit liability recognised in the balance sheet:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Present value of benefit obligation	**(4,477)**	(4,601)
Fair value of plan assets	**4,471**	2,874
Net defined benefit liability	**(6)**	(1,727)

Amounts recognised in profit or loss and other comprehensive income were as follows:

	2020 US$000	2019 US$000	2018 US$000
Amounts recognised in profit or loss			
Current service cost	**(628)**	(369)	–
Net interest expense	**(43)**	(14)	–
Net expense in the income statement	**(671)**	(383)	–
Amounts recognised in other comprehensive income			
Actuarial gains/(losses):			
– Changes in demographic assumptions	**–**	(505)	–
– Changes in financial assumptions	**112**	(54)	–
– Experience adjustments	**157**	(56)	–
Return on plan assets lower than interest income	**(34)**	(51)	–
Net remeasurement credit/(expense) in other comprehensive income	**235**	(666)	–

Changes in the benefit obligation and the plan assets were as follows:

	Benefit obligation Present value		Plan assets Fair value	
	2020 US$000	2019 US$000	**2020 US$000**	2019 US$000
At the beginning of the year	**(4,601)**	–	**2,874**	–
Acquisition of FCI (note 3)	**–**	(4,452)	**–**	3,681
Current service cost	**(628)**	(369)	**–**	–
Interest (expense)/income	**(113)**	(82)	**70**	68
Benefits paid out	**632**	912	**(632)**	(912)
Benefits paid directly by/contributions by employer	**214**	126	**1,908**	7
Remeasurements	**269**	(615)	**(34)**	(51)
Currency translation differences	**(250)**	(121)	**285**	81
At the end of the year	**(4,477)**	(4,601)	**4,471**	2,874

As at 31 December 2020, the weighted-average duration of the defined benefit obligation was 9.2 years (2019: 8.5 years).

The principal financial assumptions used in measuring the defined benefit obligation were as follows:

	2020 US$000	2019 US$000
Discount rate	**2.9%**	2.6%
Rate of increase in salaries	**4.0%**	4.0%

Mortality and leaver assumptions are based on tables published by the Korea Insurance Development Institute.

The fair value of the plan assets may be analysed as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Cash and term deposits	**4,471**	2,780
Equity-linked bonds	**–**	94
Total	**4,471**	2,874

25. Other liabilities

Other liabilities were as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
Current		
Obligations for personnel and social expenses	**48,523**	46,805
Contract liabilities	**963**	–
Deferred income	**13,388**	14,004
Deferred IP revenue	**37,324**	35,708
Other liabilities	**14,930**	16,287
Total current	**115,128**	112,804
Non-current		
Deferred royalty credits (note 18)	**4,695**	4,695
Deferred gain on initial measurement of warrants (note 18)	**–**	809
Deferred IP revenue	**44,886**	82,209
Other liabilities	**182**	331
Total non-current	**49,763**	88,044
Total	**164,891**	200,848

26. Share capital and reserves

a) Ordinary shares

The Company's share capital is comprised of ordinary shares with a nominal value of £0.10 per share.

The number of allotted and fully paid ordinary shares was as follows:

	Number of shares	Nominal value US$000
As at 31 December 2017, 2018 and 2019	76,382,139	14,204
Cancellation of treasury shares	**(3,700,000)**	**(449)**
Shares issued to employee benefit trust	**4,000,000**	**498**
As at 31 December 2020	**76,682,139**	**14,253**

On 18 May 2020, the Company cancelled 3,700,000 of the shares that it had purchased under the share buyback programme. On cancellation, the total cost of the shares was transferred from treasury shares and set against retained earnings and the nominal value of the shares cancelled of US$449 was transferred from share capital to the capital redemption reserve.

On 23 June 2020, the principal employee benefit trust subscribed for 4,000,000 new ordinary shares in the Company at nominal value for total consideration of US$498 in cash.

Ordinary shareholders have no entitlement to share in the profits of the Company except for dividends that may be declared and in the event of the Company's liquidation.

Ordinary shareholders have the right to attend, and vote at, general meetings of the Company or to appoint a proxy to attend and vote at such meetings on their behalf. Ordinary shareholders have one vote for every share held.

b) Share premium account
The share premium account represents the difference between the nominal value of shares issued and the fair value of the consideration received. The share premium account is not distributable but may be used for certain purposes specified by United Kingdom law, including to write off expenses on any issue of shares and to pay up fully paid bonus shares.

c) Other reserves

Currency translation reserve
The currency translation reserve represents the cumulative gains and losses recognised on the translation into US dollars of the Group's net investments in foreign operations.

Fair value reserve
The fair value reserve comprises gains and losses recognised on equity investments that are measured at fair value through other comprehensive income.

Cash flow hedge reserve
The cash flow hedge reserve represents the cumulative gains and losses on effective cash flow hedging instruments that will be recycled to profit or loss on the occurrence of the hedged cash flows.

Treasury shares
Treasury shares are shares purchased under the Company's share buyback programme that have not been cancelled. Details of the purchases made under the programme are set out in note 27. As at 31 December 2020, the Company held 5,413,452 of its ordinary shares with an aggregate nominal value of £541,345 in treasury, which represented 7.1% of its issued share capital.

Capital redemption reserve
The capital redemption reserve represents the aggregate nominal value of shares purchased under the Company's share buyback programme that have been cancelled and is not distributable.

Movements on other reserves were as follows:

	Capital redemption reserve US$000	Currency translation reserve US$000	Fair value reserve US$000	Hedging reserve US$000	Treasury shares US$000	Total US$000
As at 31 December 2017	571	(3,699)	7,822	5,283	–	9,977
Other comprehensive income/(expense):						
– Currency translation loss on foreign operations	–	(527)	–	–	–	(527)
– Fair value loss on available-for-sale investments	–	–	(23,764)	–	–	(23,764)
– Cash flow hedges:						
Fair value loss recognised on effective hedges	–	–	–	(10,075)	–	(10,075)
Fair value gain transferred to profit or loss	–	–	–	(2,343)	–	(2,343)
– Income tax (expense)/credit	–	(78)	1,015	2,376	–	3,313
As at 31 December 2018	571	(4,304)	(14,927)	(4,759)	–	(23,419)
Other comprehensive income/(expense):						
– Currency translation gain on foreign operations	–	3,019	–	–	–	3,019
– Fair value loss on equity investments	–	–	(6,994)	–	–	(6,994)
– Cash flow hedges:						
Fair value loss recognised on effective hedges	–	–	–	(3,941)	–	(3,941)
Fair value loss transferred to profit or loss	–	–	–	9,549	–	9,549
– Income tax expense	–	(91)	–	(1,065)	–	(1,156)
Other changes in equity:						
– Purchase of own shares into treasury	–	–	–	–	(251,787)	(251,787)
As at 31 December 2019	571	(1,376)	(21,921)	(216)	(251,787)	(274,729)
Other comprehensive income/(expense):						
– Currency translation gain on foreign operations	**–**	**2,603**	**–**	**–**	**–**	**2,603**
– Fair value gain on equity investments	**–**	**–**	**53**	**–**	**–**	**53**
– Cash flow hedges:						
Fair value gain recognised on effective hedges	**–**	**–**	**–**	**8,116**	**–**	**8,116**
Fair value gain transferred to profit or loss	**–**	**–**	**–**	**(607)**	**–**	**(607)**
– Income tax credit/(expense)	**–**	**370**	**–**	**(1,427)**	**–**	**(1,057)**
Other changes in equity:						
– Purchase of own shares into treasury	**–**	**–**	**–**	**–**	**(80,500)**	**(80,500)**
– Cancellation of treasury shares	**449**	**–**	**–**	**–**	**129,270**	**129,719**
As at 31 December 2020	**1,020**	**1,597**	**(21,868)**	**5,866**	**(203,017)**	**(216,402)**

27. Share buyback programme

Background
We initiated our share buyback programme in May 2016.

By the end of 2020, the Company had purchased 13,597,268 of its own ordinary shares at a total cost of US$518,810 (including transaction costs of US$3,679), of which 8,183,816 shares had been cancelled and 5,413,452 shares were held in treasury.

Shareholder authority for a share buyback programme was first granted to the Directors at the Company's 2016 AGM and has been renewed at each subsequent AGM. At the Company's 2020 AGM, the Directors were granted a new authority to purchase up to 10,395,809 of the Company's ordinary shares, representing approximately 15% of the issued ordinary share capital of the Company as at 25 March 2020. Such authority shall (unless previously renewed, varied or revoked) expire on the day before the next AGM of the Company or on 30 June 2021, whichever is the earlier.

Purchases made under the share buyback programme are off-market and are effected by way of contingent forward purchase contracts entered into with brokers. Barclays, Goldman Sachs, HSBC or Merrill Lynch may be appointed as brokers for purchases under the 2020 AGM authority.

Share purchases during 2020 were made under the 2019 AGM authority. We have not yet announced any purchases under the 2020 AGM authority.

Shares purchased during the period

Year ended 31 December 2018
On 6 November 2018, the Company announced details of the first tranche of the 2018 Buyback Programme under which it committed to purchase shares with a minimum cost of €100.0 million and a maximum cost of €150.0 million. On initiation of this tranche, we recognised a liability and a corresponding debit to retained earnings of €150.0 million (US$171,173) in respect of the maximum obligation to purchase shares. We also debited transaction costs incurred of US$14 to retained earnings.

We were not required to make any intermediate settlements in relation to this tranche during 2018.

We hedge the currency translation exposure on outstanding liabilities to purchase shares using currency forwards and swaps. After taking into account hedging, we recognised a net currency translation loss of US$898 in profit or loss in relation to liabilities to purchase shares outstanding during 2018.

Year ended 31 December 2019
On 31 May 2019, we completed the first and final settlement of the outstanding tranche of the 2018 Buyback Programme. We purchased 3,941,852 shares at a cost of €100.0 million (US$111,470) and incurred transaction costs of US$625. On conclusion of the tranche, we credited back to retained earnings the remaining US$55,847 of the obligation to purchase shares initially recognised.

No further tranches were initiated under the 2018 Buyback Programme.

On 5 June 2019, we announced details of the first tranche of the 2019 Buyback Programme under which the Company committed to purchase shares with a minimum cost of €125.0 million and a maximum cost of €150.0 million. On initiation of this tranche, we recognised a liability and a corresponding debit to retained earnings of €150.0 million (US$168,915) in respect of the maximum obligation to purchase shares. We made intermediate settlements of this tranche on 19 September 2019 and 31 October 2019 and final settlement and conclusion of the tranche took place on 19 December 2019. We purchased 3,134,895 shares at a cost of €125.0 million (US$138,975) and incurred transaction costs of US$703. On conclusion of the tranche, we credited back to earnings the remaining €25.0 million (US$27,679) of the obligation to purchase shares initially recognised.

During 2019, we showed a debit to retained earnings of US$4,431, which mirrored the gain recognised in profit or loss on the translation into US dollars of the Euro-denominated liability that existed in relation to shares that were purchased during the period.

After taking into account hedging, we recognised a net currency translation loss of US$4,616 in profit or loss in relation to liabilities to purchase shares outstanding during 2019.

Year ended 31 December 2020
On 12 March 2020, the Company announced details of the second tranche of the 2019 Buyback Programme under which it committed to purchase shares with a minimum cost of €70.0 million and a maximum cost of €90.0 million. On initiation of this tranche, we recognised a liability of €90.0 million (US$101,149) and a corresponding debit to retained earnings in respect of the maximum obligation to purchase shares.

We made intermediate settlements of this tranche on 18 May 2020, 30 June 2020 and 10 August 2020 and final settlement and conclusion of the tranche took place on 8 October 2020. We purchased 2,036,705 shares in total under this tranche at a cost of €70.0 million (US$80,031) and incurred transaction costs of US$455. On conclusion of this tranche, we credited back to equity the remaining €20.0 million (US$23,386) of the obligation to purchase shares initially recognised.

During 2020, we showed a credit to retained earnings of US$1,374, which mirrored the loss recognised in profit or loss on the translation into US dollars of the Euro-denominated liability that existed in relation to shares that were purchased during the period.

After taking into account hedging, we recognised a net currency translation loss of US$778 in profit or loss in relation to liabilities to purchase shares outstanding during 2020.

Movements on reserves
Movements on reserves shown in the statement of changes in equity in relation to the share buyback programme are derived as follows:

	Retained earnings		Treasury shares
	Share buyback obligation US$000	Currency translation differences US$000	Purchase of shares into treasury US$000
Year ended 31 December 2018			
Obligation recognised	(171,187)	–	–
Decrease in equity	(171,187)	–	–
Year ended 31 December 2019			
Obligation recognised	(168,901)	–	–
Settlements	254,876	(4,431)	(250,445)
Transaction costs	–	–	(1,342)
Release of surplus obligations	83,530	–	–
Increase/(decrease) in equity	169,505	(4,431)	(251,787)
Year ended 31 December 2020			
Obligation recognised	**(101,149)**	**–**	**–**
Settlements	**78,671**	**1,374**	**(80,045)**
Transaction costs	**–**	**–**	**(455)**
Release of surplus obligations	**23,386**	**–**	**–**
Increase/(decrease) in equity	**908**	**1,374**	**(80,500)**

28. Share-based compensation

The Company operates a number of share-based compensation plans under which it grants awards over its ordinary shares to certain of the Group's employees.

a) Plan without performance conditions

Employee Share Plan
Shareholders approved the Employee Share Plan ("ESP") at the Company's 2013 AGM.

Awards granted under the ESP vest over a three- or four-year period with each award vesting in equal instalments on each anniversary of the grant date provided the participant remains in employment by the Group at the vesting date and, if unexercised, expire on the seventh anniversary of the grant date.

Awards granted under the ESP take the form of either a nominal cost share option, a conditional share award or, in jurisdictions where it is not feasible to deliver shares to employees, a cash-settled award linked to the market value of the Company's shares.

Fair value of awards
The fair value of equity-settled awards granted under the ESP was measured using the Black-Scholes option pricing model. The weighted average fair value of options and conditional share awards granted during the years ended 31 December 2020, 2019 and 2018 and the principal assumptions made in measuring those fair values were as follows:

	Grant in 2020	Grant in 2019	Grant in 2018
Weighted average fair value	**€37.80**	€41.63	€21.95
Principal assumptions:			
– Share price on grant date	**€37.85**	€41.71	€22.06
– Exercise price	**€0.05**	€0.09	€0.11
– Expected volatility of the Company's shares	**49%**	45%	44%
– Expected option life	**3 – 7 years**	3 – 6 years	3 – 6 years
– Dividend yield on the Company's shares	**0%**	0%	0%
– Risk-free interest rate	**(0.7)%**	(0.5)%	(0.3)%

Expected volatility was determined based on the historical volatility of the market price of the Company's ordinary shares over the expected life of the awards.

b) Performance-based plan

Long-Term Incentive Plan
Shareholders approved the Long-Term Incentive Plan ("LTIP") at the Company's 2015 AGM. All employees are eligible to participate in the plan but in practice awards will be targeted at the Executive Director level and others in senior roles.

Awards granted under the LTIP take the form of either a nil or nominal cost share option, a conditional share award or, in jurisdictions where it is not feasible to deliver shares to employees, a cash-settled award linked to the market value of the Company's shares.

Awards under the LTIP generally vest three years from the grant date provided certain performance conditions are satisfied and the participant remains in employment by the Group at the end of the vesting period.

a) Total shareholder return ("TSR")
Up to one third of each award vests depending on the TSR on the Company's ordinary shares relative to the TSR of the constituents of the S&P 1500 Select Semiconductor Index over the three-year performance period. If the TSR on the Company's ordinary shares is negative over the vesting period, vesting is capped at one half of this element of the award irrespective of whether the TSR on the Company's ordinary shares has exceeded the TSR of the constituents of the S&P 1500 Select Semiconductor Index.

b) Group Performance Conditions
Up to one half of each award vests depending upon the Group's revenue in each year of the three-year performance period. Up to one half of each award vests depending on the Group's underlying operating margin in each year of the three-year performance period.

Notwithstanding the performance conditions, the Remuneration Committee may apply a downward adjustment to the number of awards that vest if it considers this to be necessary taking into account the Group's financial performance and overall financial health.

Fair value of awards
The fair value of equity-settled awards made under the EIP and the LTIP was measured using a variant of the Monte Carlo valuation model. The weighted average fair value of options and conditional share awards granted during the years ended 31 December 2020, 2019 and 2018 and the principal assumptions made in measuring those fair values were as follows:

	Grant in 2020	Grant in 2019	Grant in 2018
Weighted average fair value	**€35.99**	€24.66	€23.23
Principal assumptions:			
– Share price on grant date	**€28.73**	€27.10	€25.25
– Exercise price	**€0.07**	€0.09	€0.09
– Expected volatility of the Company's shares	**49%**	45%	44%
– Expected option life	**6 years**	6 years	6 years
– Dividend yield on the Company's shares	**0%**	0%	0%
– Risk-free interest rate	**(0.7)%**	(0.5)%	(0.3)%

Expected volatility was determined based on the historical volatility of the market price of the Company's ordinary shares over the expected life of the awards.

c) Share awards
Movements in the total number of options and conditional share awards outstanding during the years ended 31 December 2020 and 2019 were as follows:

	2020		2019	
	Options	Weighted average exercise price €	Options	Weighted average exercise price €
Outstanding at the beginning of the period	**4,342,689**	**0.13**	5,472,635	0.65
Granted	**1,909,129**	**0.05**	1,552,279	0.09
Exercised	**(1,174,603)**	**0.21**	(1,802,547)	1.68
Forfeited	**(328,176)**	**0.11**	(879,678)	0.12
Outstanding at the end of the period	**4,749,039**	**0.08**	4,342,689	0.13
Options exercisable at the end of the period	**519,877**	**0.14**	533,304	0.43

When awards were exercised during 2020, the weighted average of the Company's share price was €37.88 (2019: €36.97).

The weighted average contractual life and exercise price of awards outstanding as at 31 December 2020 and 2019 were as follows:

	2020		2019	
Range of exercise prices	Number outstanding	Weighted average remaining contractual life (in years)	Number outstanding	Weighted average remaining contractual life (in years)
€0.0 – 1.00	**4,749,039**	**5.08**	4,330,836	4.86
€1.00 – 8.00	**–**	**n/a**	–	n/a
€8.00 – 16.85	**–**	**n/a**	11,853	0.70
€0.00 – 16.85	**4,749,039**	**5.08**	4,342,689	4.85

d) Dialog shares held by employee benefit trusts
The Company provides finance to two trusts to purchase its ordinary shares in order to meet its obligations under its share-based compensation plans. As at 31 December 2020, the trusts held 3,630,109 ordinary shares (2019: 804,712 ordinary shares).

Movements in the number of shares held by the trusts during the years ended 31 December 2020 and 2019 were as follows:

	2020		2019	
	Number of shares	Cost US$000	Number of shares	Cost US$000
At the beginning of the period	**804,712**	**22,133**	2,607,259	22,514
Subscription for newly-issued shares	**4,000,000**	**498**	–	–
Sale or transfer of shares	**(1,174,603)**	**(20,740)**	(1,802,547)	(381)
At the end of the period	**3,630,109**	**1,891**	804,712	22,133

29. Commitments

Software licence commitments
Future minimum payments under software licences were as follows:

	2020 US$000	2019 US$000
Within one year	**28,235**	20,761
Between one and two years	**21,802**	6,018
Between two and three years	**15,615**	3,299
Between three and four years	**535**	73
Between four and five years	**2**	15
Total minimum payments	**66,189**	30,166

During 2020, the Group recognised in profit or loss software licence fees of US$14,670 (2019: US$15,576; 2018: US$13,854).

Capital commitments
As at 31 December 2020, the Group has contractual commitments for the acquisition of property, plant and equipment of US$4,201 (2019: US$3,863) and for the acquisition of intangible assets of US$1,927 (2019: US$1,538).

30. Additional disclosures on financial instruments

Analysis by class and category

In the following tables, the carrying amounts of the financial assets and financial liabilities held by the Group as at 31 December 2020 and 2019 are analysed by class and category:

	As at 31 December 2020					
	Amortised cost US$000	At fair value through profit or loss US$000	At fair value in designated hedges US$000	At fair value through other comprehensive income US$000	Net book value US$000	Fair value US$000
Financial assets						
Cash and deposits	269,880	–	–	–	269,880	269,880
Money market funds	–	254,000	–	–	254,000	254,000
Cash and cash equivalents	269,880	254,000	–	–	523,880	523,880
Trade and other receivables	120,629	–	–	–	120,629	120,629
Energous shares	–	–	–	3,132	3,132	3,132
Semitech shares	–	–	–	401	401	401
Investments	–	–	–	3,533	3,533	3,533
Currency derivatives	–	–	7,586	–	7,586	7,586
Restricted cash	890	–	–	–	890	890
Rental and other deposits	2,263	–	–	–	2,263	2,263
Other financial assets	3,153	–	7,586	–	10,739	10,739
Total financial assets	393,662	254,000	7,586	3,533	658,781	658,781
Financial liabilities						
Trade and other payables	(151,847)	–	–	–	(151,847)	(151,847)
Lease liabilities	(44,124)	–	–	–	(44,124)	(47,108)
Prepayment from Apple	(73,250)	–	–	–	(73,250)	(74,534)
Bank loans	(1,149)	–	–	–	(1,149)	(1,149)
Currency derivatives	–	–	(715)	–	(715)	(715)
Deferred consideration	(164)	–	–	–	(164)	(164)
Other financial liabilities	(74,563)	–	(715)	–	(75,278)	(76,562)
Total financial liabilities	(270,534)	–	(715)	–	(271,249)	(275,517)

	As at 31 December 2019					
	Amortised cost US$000	At fair value through profit or loss US$000	At fair value in designated hedges US$000	At fair value through other comprehensive income US$000	Net book value US$000	Fair value US$000
Financial assets						
Cash and deposits	442,544	–	–	–	442,544	442,544
Money market funds	–	582,000	–	–	582,000	582,000
Cash and cash equivalents	442,544	582,000	–	–	1,024,544	1,024,544
Trade and other receivables	134,079	–	–	–	134,079	134,079
Energous shares	–	–	–	3,079	3,079	3,079
Energous warrants	–	31	–	–	31	31
Other investments	–	31	–	3,079	3,110	
Currency derivatives	–	–	1,056	–	1,056	1,056
Rental and other deposits	2,202	–	–	–	2,202	2,202
Other financial assets	2,202	–	1,056	–	3,258	
Total financial assets	578,825	582,031	1,056	3,079	1,164,991	
Financial liabilities						
Trade and other payables	(104,620)	–	–	–	(104,620)	(104,620)
Lease liabilities	(43,044)	–	–	–	(43,044)	(45,926)
Prepayment from Apple	(194,467)	–	–	–	(194,467)	(196,278)
Bank loans	(1,816)	–	–	–	(1,816)	(1,816)
Currency derivatives	–	–	(1,324)	–	(1,324)	(1,324)
Deferred consideration	(1,063)	–	–	–	(1,063)	(1,063)
Contingent consideration	–	(6,666)	–	–	(6,666)	(6,666)
Other financial liabilities	(197,346)	(6,666)	(1,324)	–	(205,336)	
Total financial liabilities	(345,010)	(6,666)	(1,324)	–	(353,000)	

Fair value measurement

a) Financial instruments carried at fair value

All financial instruments that are carried at fair value are revalued on a recurring basis. We have not chosen to designate any financial instruments at fair value through profit or loss on initial recognition.

We measured the fair value of these financial assets using the following methods and assumptions:

- Investments in money market funds – based on the net asset value of the funds;
- Energous shares (listed on NASDAQ) – measured at the quoted bid price at the close of business on the balance sheet date;
- Semitech shares (unlisted) – measured by reference to the market value of comparable companies as a multiple of their revenues; and
- Energous warrants – measured using a Black-Scholes valuation model based on the quoted bid price and volatility of Energous' common shares.

We measure the fair value of currency derivatives represents the present value of the future contractual cash flows, which is estimated using observable spot exchange rates and by applying a discount rate that is based on the yield curves of the respective currencies and reflects the credit risk of the counterparties.

Contingent consideration in respect of the acquisition of Creative Chips was dependent on its performance against revenue targets for 2020 and 2021 and the achievement of certain product development targets by the end of 2020. When the product development targets were expected to be met, we measured the fair value of the contingent consideration based on the expected value of a range of possible outcomes for Creative Chips' revenues for 2020 and 2021.

In the following table, the financial instruments that are carried at fair value are categorised into one of three levels in a fair value hierarchy according to the nature of the significant inputs to the valuation techniques that are used to determine their fair value as follows:

- Level 1 – Quoted (unadjusted) market prices in active markets for identical assets or liabilities;
- Level 2 – Inputs other than Level 1 that are observable either directly (as market prices) or indirectly (derived from market prices); and
- Level 3 – Unobservable inputs, such as those derived from internal models or using other valuation methods.

	As at 31 December 2020				As at 31 December 2019			
	Level 1 US\$000	**Level 2 US\$000**	**Level 3 US\$000**	**Total US\$000**	Level 1 US\$000	Level 2 US\$000	Level 3 US\$000	Total US\$000
Financial assets carried at fair value								
Cash and cash equivalents								
– Money market funds	**254,000**	**–**	**–**	**254,000**	582,000	–	–	582,000
Investments:								
– Energous shares	**3,132**	**–**	**–**	**3,132**	3,079	–	–	3,079
– Semitech shares	**–**	**–**	**401**	**401**	–	–	–	–
Derivative financial instruments:								
– Currency derivatives	**–**	**7,586**	**–**	**7,586**	–	1,056	–	1,056
– Energous warrants	**–**	**–**	**–**	**–**	–	–	31	31
Total financial assets carried at fair value	**257,132**	**7,586**	**401**	**265,119**	585,079	1,056	31	586,166
Financial liabilities carried at fair value								
Derivative financial instruments:								
– Currency derivatives	**–**	**(715)**	**–**	**(715)**	–	(1,324)	–	(1,324)
Contingent consideration	**–**	**–**	**–**	**–**	–	–	(6,666)	(6,666)
Total financial liabilities carried at fair value	**–**	**(715)**	**–**	**(715)**	–	(1,324)	(6,666)	(7,990)

During 2020, there were no transfers between Level 1 and Level 2.

In the following tables, we present a reconciliation of the changes in the Level 3 fair values:

	Semitech shares US\$000	Energous warrants US\$000	Total US\$000
As at 31 December 2017	–	12,318	12,318
Fair value loss (other finance expense)	–	(10,853)	(10,853)
As at 31 December 2018	–	1,465	1,465
Fair value loss (other finance expense)	–	(1,434)	(1,434)
As at 31 December 2019	–	31	31
Acquisition of business	**401**	**–**	**401**
Fair value loss (other finance expense)	**–**	**(31)**	**(31)**
At the end of the year	**401**	**(31)**	**370**

Our remaining warrants over shares in Energous Corporation expired on 5 July 2020.

	Contingent consideration		
	2020 US$000	2019 US$000	2018 US$000
Financial liabilities carried at fair value			
At the beginning of the year	**(6,666)**	(16,414)	(23,709)
Additions	**–**	(6,517)	(723)
Change in estimate (other operating income)	**6,938**	–	878
Unwinding of discount (interest expense)	**(272)**	(464)	(2,220)
Settlements	**–**	16,729	9,360
At the end of the year	**–**	(6,666)	(16,414)

As explained in note 3, the fair value of the contingent consideration payable for Creative Chips was reduced to US$nil during 2020.

b) Financial instruments not carried at fair value
We have calculated the fair value of the non-interest bearing prepayment from Apple by discounting the future scheduled recoupments based upon the observable yield curve at the balance sheet date for US dollar-denominated debt with an equivalent risk profile (Level 2).

We have calculated the fair value of lease liabilities by discounting the future lease payments at the relevant lessee's incremental borrowing rate based on observable yield curves at the balance sheet date (Level 2).

We have calculated the fair value of the bank loans acquired with Creative Chips by discounting the future principal repayments based on the observable yield curve at the balance sheet date for Euro-denominated debt with an equivalent risk profile (Level 2).

Other financial assets and financial liabilities that are not carried at fair value are of short maturity and/or bear interest at floating rates. We therefore consider that their carrying amounts approximate to their fair values (Level 2).

31. Financial risk management

Background
The Group's central treasury function is responsible for ensuring that adequate funding is available to meet the Group's requirements and for maintaining an efficient capital structure, together with managing the Group's counterparty credit risk, foreign currency and interest rate exposures. All treasury operations are conducted within strict policies and guidelines that are approved by the Board.

We use currency derivatives to manage currency risk and we hold certain equity options and warrants for strategic reasons. We do not hold or issue derivative financial instruments for speculative purposes.

Credit risk
Credit risk is the risk that a customer or a counterparty financial institution fails to meet its contractual obligations as they fall due causing the Group to incur a financial loss. The Group is exposed to credit risk in relation to receivables from its customers and cash and cash equivalents and other financial assets held with financial institutions.

Before accepting a new customer, we assess the potential customer's credit quality and establish a credit limit. Credit quality is assessed using data maintained by reputable credit agencies, by checking references included in credit applications, and, where they are available, by reviewing the customer's recent financial statements. Credit limits are subject to multiple levels of authorisation and are reviewed on a regular basis. We make an allowance for lifetime expected credit losses on receivables that is regularly reviewed and, if necessary, adjusted on the basis of current information about the customer's creditworthiness.

The Group depends on a relatively small number of customers for a substantial part of its revenue. As at 31 December 2020, trade accounts receivable amounted to US$107,512 (2019: US$122,528), including US$39,869 (2019: US$85,298) due from our largest customer.

During 2020, we continued to utilise non-recourse receivables financing facilities provided by two financial institutions in an aggregate amount of US$240 million. The principal facility of US$220 million will mature on 31 October 2021.

Receivables sold under these facilities are derecognised from the Group's balance sheet because the financial institutions concerned assume all credit risk associated with them. When a receivable is sold, the Group is credited with the majority of the invoice amount with the balance credited on the earlier of the date on which the customer pays the amount due or 120 days after the receivable becomes due for payment. As at 31 December 2020, cash and cash equivalents included a benefit of US$74,232 (2019: US$65,439) in relation to receivables sold under these facilities and trade and other receivables included US$13,117 (2019: US$11,551) retained by the financial institutions.

Cash deposits and cash equivalent investments are placed, where possible, with financial institutions that satisfy the criteria set out in our Board approved treasury policy, including a requirement that each has a median credit rating of not less than A- (Standard & Poor's), A3 (Moody's), A- (Fitch) or equivalent. Credit risk is further limited by investing only in liquid instruments.

Market risk

Market risk is the risk that the fair value of, or cash flows associated with, a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency risk (due to changes in currency exchange rates), interest rate risk (due to changes in market interest rates) and other price risk.

a) Currency risk

The US dollar is the functional currency of the Company and its principal subsidiaries.

Currency risk arises on transactions that are denominated in a currency other than the functional currency of the entity that enters into them. Nearly all of the Group's sales and cost of materials are denominated in US dollars but certain operating expenses and tax cash flows are denominated in currencies other than the US dollar, in particular the Euro and the pound sterling. It is the Group's policy to hedge a proportion of the currency risk associated with highly probable forecast cash flows on a rolling 12-month basis. As the timing of the forecast cash flows draws nearer, the proportion of the currency risk that is hedged increases within set parameters.

Where possible, forward currency contracts that are entered into hedge forecast cash flows are designated as hedging instruments in cash flow hedge relationships. During 2020, a gain of US$8,116 (2019: a loss of US$3,941; 2018: a loss of US$10,075), was recognised in other comprehensive income representing the change in the fair value of currency derivatives in effective hedging relationships and a cumulative gain of US$607 (2019: loss of US$9,549; 2018: gain of US$2,343) was reclassified to profit or loss on the occurrence of the hedged cash flows.

Currency derivatives held to hedge forecast cash outflows were as follows:

	As at 31 December 2020 Net notional amount			
	Euro 000	**Pound sterling 000**	**Japanese Yen 000**	**Chinese Renminbi 000**
Maturity				
0 – 3 months	**29,000**	**8,000**	**–**	**–**
4 – 6 months	**24,000**	**8,000**	**–**	**–**
7 – 9 months	**14,000**	**4,000**	**–**	**–**
10 – 12 months	**4,000**	**2,750**	**–**	**–**
Total	**71,000**	**22,750**	**–**	**–**
Weighted average exchange rate US$ =	**0.86**	**0.78**	**–**	**–**

	As at 31 December 2019 Net notional amount			
	Euro 000	Pound sterling 000	Japanese Yen 000	Chinese Renminbi 000
Maturity				
0 – 3 months	28,250	13,500	175,000	14,500
4 – 6 months	21,250	13,250	90,000	10,000
7 – 9 months	20,250	7,250	180,000	14,000
10 – 12 months	10,500	1,750	–	–
Total	80,250	35,750	445,000	38,500
Weighted average exchange rate US$ =	0.87	0.76	106.31	7.05

During the year, the following amounts were recognised in profit or loss in relation to forward currency contracts in cash flow hedge relationships:

	2020 US$000	2019 US$000	2018 US$000
Gain/(loss) reclassified from hedging reserve			
Hedged item affected profit or loss:			
– Cost of sales	**(215)**	(676)	436
– Selling and marketing expenses	**(108)**	(290)	47
– General and administrative expenses	**(140)**	(1,191)	96
– Research and development expenses	**(609)**	(5,352)	1,422
– Income tax expense	**1,679**	(2,040)	342
	607	(9,549)	2,343
Hedge ineffectiveness			
Other finance (expense)/income	**(2)**	1	(13)

Hedge ineffectiveness was determined as follows:

	2020 US$000	2019 US$000	2018 US$000
Change in fair value of designated hedging instruments	**7,507**	5,609	(12,431)
Change in value of hedged item used to determine hedge ineffectiveness	**(7,509)**	(5,608)	12,418
Hedge ineffectiveness recognised in profit or loss	**(2)**	1	(13)

If the US dollar was to depreciate or appreciate by 10% against each of the foreign currencies in respect of which there were effective cash flow hedges in place as at 31 December 2020, there would be an incremental fair value gain of US$13,119 (2019: US$16,342) or an incremental fair value loss of US$10,734 (2019: US$13,371), respectively, recognised in other comprehensive income that would be reclassified to profit or loss on the occurrence of the hedged cash flows.

Currency translation risk arises on financial assets and liabilities that are denominated in a currency other than the functional currency of the entity that holds them. The Group's policy allows for such exposures to be hedged using currency derivatives.

During 2020 and 2019, we used forward currency contracts and currency swaps to hedge the translation exposure on the Euro-denominated liabilities that arose in relation to tranches of the Company's share buyback programme. At the end of 2020 and 2019, there were no outstanding contracts.

After taking into account currency hedging activities, the currency profile of the Group's net financial assets/(liabilities) was as follows:

	As at 31 December 2020 US$000	As at 31 December 2019 US$000
US dollar	**416,120**	832,922
Euro	**(19,024)**	(10,368)
Pound sterling	**(10,747)**	(7,918)
Taiwanese dollar	**(121)**	(405)
Other	**1,304**	(2,240)
Total	**387,532**	811,991

If the US dollar was to appreciate or depreciate by 10% against each of the foreign currencies in which financial assets and financial liabilities were denominated as at 31 December 2020, there would be an exchange gain of US$3,287 (2019: gain of US$2,093) or an exchange loss of US$3,287 (2019: loss of US$2,093), respectively, recognised in arriving at the Group's profit before tax.

Currency translation risk also arises on consolidation in relation to the translation into US dollars of net investments in foreign operations but the exposure is not significant because the US dollar is the functional currency of the Company and each of its principal subsidiaries.

b) Interest risk
The interest rate profile of the Group's financial assets and liabilities was as follows:

	As at 31 December 2020			
	Interest-bearing			
	Floating rate US$000	Fixed rate US$000	Non-interest bearing US$000	Total US$000
Financial assets				
Cash and cash equivalents	**449,648**	**–**	**74,232**	**523,880**
Trade and other receivables	**–**	**–**	**120,629**	**120,629**
Investments	**–**	**–**	**3,533**	**3,533**
Other financial assets	**–**	**–**	**10,739**	**10,739**
Total financial assets	**449,648**	**–**	**209,133**	**658,781**
Financial liabilities				
Trade and other payables	**–**	**–**	**(151,847)**	**(151,847)**
Lease liabilities	**–**	**(44,124)**	**–**	**(44,124)**
Other financial liabilities	**–**	**(1,149)**	**(74,129)**	**(75,278)**
Total financial liabilities	**–**	**(45,273)**	**(225,976)**	**(271,249)**

	As at 31 December 2019			
	Interest-bearing			
	Floating rate US$000	Fixed rate US$000	Non-interest bearing US$000	Total US$000
Financial assets				
Cash and cash equivalents	959,105	–	65,439	1,024,544
Trade and other receivables	–	–	134,079	134,079
Investments	–	–	3,110	3,110
Other financial assets	–	–	3,258	3,258
Total financial assets	959,105	–	205,886	1,164,991
Financial liabilities				
Trade and other payables	–	–	(104,620)	(104,620)
Lease liabilities	–	(43,044)	–	(43,044)
Other financial liabilities	–	(1,816)	(203,520)	(205,336)
Total financial liabilities	–	(44,860)	(308,140)	(353,000)

The Group's principal exposure to interest rate risk is in relation to interest income on investments in money market funds and short-term deposits, which attract US dollar interest rates. When applied to the Group's floating interest rate exposures as at 31 December 2020, an increase or decrease of 50 basis points in market interest rates would increase or decrease the Group's profit before tax by US$2,120 (2019: US$4,755), respectively.

c) Other price risk
As at 31 December 2020, we held common shares in Energous Corporation ("Energous") with a fair value of US$3,132 (2019: US$3,079). Energous' common shares are listed on NASDAQ. Changes in the fair value of the shares are recognised in other comprehensive income. If Energous' share price as at 31 December 2020 was to increase/decrease by 10%, other comprehensive income would increase/decrease by US$313 (2019: US$308).

Liquidity risk
Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with its financial liabilities.

We regularly monitor cash flows at both Group and entity level. As at 31 December 2020, cash and cash equivalents amounted to US$523,880 (2019: US$1,024,544).

In July 2017, the Company and certain of its subsidiaries, as guarantors, entered into a US$150 million three-year revolving credit facility provided by four financial institutions. The facility has since been extended by a year on two occasions and will now mature in July 2022.The facility is committed and is available for general corporate purposes. We retain the option to increase the amount of the facility by US$75 million subject to certain conditions. The credit agreement contains various provisions, covenants and representations that are customary for such a facility. The facility remained undrawn as at 31 December 2020.

The contractual maturity of financial liabilities was as follows:

	As at 31 December 2020						
	Within 3 months US$000	**Between 3 to 12 months US$000**	**Between 1 to 2 years US$000**	**Between 2 to 5 years US$000**	**After 5 years US$000**	**Effect of discounting US$000**	**Carrying amount US$000**
Trade and other payables	**151,847**	**–**	**–**	**–**	**–**	**–**	**151,847**
Lease liabilities	**3,256**	**9,644**	**11,655**	**20,549**	**4,368**	**(5,348)**	**44,124**
Prepayment from Apple	**12,500**	**37,500**	**25,000**	**–**	**–**	**(1,750)**	**73,250**
Bank loans	**218**	**479**	**417**	**35**	**–**	**–**	**1,149**
Deferred consideration	**42**	**64**	**43**	**15**	**–**	**–**	**164**
Other non-derivative liabilities	**16,016**	**47,687**	**37,115**	**20,599**	**4,368**	**(7,098)**	**118,687**
Total non-derivative liabilities	**167,863**	**47,687**	**37,115**	**20,599**	**4,368**	**(7,098)**	**270,534**
Cash flows on derivative liabilities							
– Payments	**6,824**	**1,229**	**–**	**–**	**–**	**–**	**8,053**
– Receipts	**(6,124)**	**(1,227)**	**–**	**–**	**–**	**–**	**(7,351)**
Cash flows on financial liabilities	**168,563**	**47,689**	**37,115**	**20,599**	**4,368**	**(7,098)**	**271,236**

	As at 31 December 2019						
	Within 3 months US$000	Between 3 to 12 months US$000	Between 1 to 2 years US$000	Between 2 to 5 years US$000	After 5 years US$000	Effect of discounting US$000	Carrying amount US$000
Trade and other payables	104,620	–	–	–	–	–	104,620
Lease liabilities	2,833	8,306	9,966	22,501	5,737	(6,299)	43,044
Prepayment from Apple	50,000	75,000	50,000	25,000	–	(5,533)	194,467
Bank loans	198	596	608	414	–	–	1,816
Deferred consideration	635	403	25	–	–	–	1,063
Contingent consideration	–	–	3,387	5,261	–	(1,982)	6,666
Other non-derivative liabilities	53,666	84,305	63,986	53,176	5,737	(13,814)	247,056
Total non-derivative liabilities	158,286	84,305	63,986	53,176	5,737	(13,814)	351,676
Cash flows on derivative liabilities:							
– Payments	34,636	81,379	–	–	–	–	116,015
– Receipts	(33,858)	(80,225)	–	–	–	–	(114,083)
Cash flows on financial liabilities	159,064	85,459	63,986	53,176	5,737	(13,814)	353,608

Capital management

The Group's capital is represented by its total equity. As at 31 December 2020, the Group's total equity was US$1,654,528 (2019: US$1,572,584).

We seek to maintain a capital structure that supports the ongoing activities of our business and its strategic objectives in order to deliver long-term returns to shareholders. We allocate capital to support organic and inorganic growth, investing to support research and development and our product pipeline. We will fund our growth strategy using a mix of equity and debt after giving consideration to prevailing market conditions.

In May 2016, we initiated a share buyback programme as part of our strategy to deliver shareholder returns. Since then, we have returned €463.7 million (US$515,131) to shareholders through six tranches of the programme. We will seek renewal of the share buyback authority at the Company's 2021 AGM.

32. Segment and geographic information

a) Analysis by reporting segment

Segment information is presented in the financial statements on a basis consistent with the information presented to the Management Team (the "chief operating decision-maker") for the purposes of allocating resources within the Group and assessing the performance of the Group's businesses. Members of the Management Team are identified on pages 88 and 89.

The Group's reporting segments are determined based on the nature of the products that they provide to our customers.

Prior to the acquisition of Adesto at the beginning of the third quarter of 2020, the Group had three reporting segments: Custom Mixed Signal; Advanced Mixed Signal; and Connectivity & Audio. Custom Mixed Signal included our Industrial Mixed Signal business unit. We initially managed Adesto on a stand-alone basis and reported its results separately to the Management Team. During the fourth quarter of 2020, we changed the Group's internal reporting structure, bringing together Adesto and the Industrial Mixed Signal business unit to form a single operating segment that we named Industrial IoT. The Group therefore now has four reporting segments: Custom Mixed Signal; Advanced Mixed Signal; Connectivity & Audio; and Industrial IoT:

- Custom Mixed Signal provides custom ICs designed to meet the needs of our customers in the mobile, automotive, computing and storage markets;
- Advanced Mixed Signal provides standard products including CMICs, AC/DC converter solutions for smaller, fast charging power adaptors for portable devices as well as LED drivers for backlighting and solid state lighting products;
- Connectivity & Audio provides standard products incorporating short-range wireless, digital cordless, Bluetooth® low energy, audio and low-power Wi-Fi technologies; and
- Industrial IoT provides products enabling smart factory and building automation including non-volatile memory ("NVM") ICs, industrial communication ICs, custom-designed ASICs and embedded systems, servers and software.

Comparative information for 2019 has been restated to reflect the transfer of the Industrial Mixed Signal business unit from Custom Mixed Signal to Industrial IoT.

Each of the Group's operating segments has a manager who is responsible for its performance and is accountable to the Chief Executive Officer. Custom Mixed Signal comprises our Custom Mixed Signal business group and our Automotive business unit, both of which meet the definition of an operating segment but have been aggregated because they have similar economic characteristics and each provides custom products to similar types of customers through similar distribution channels. Otherwise, we have not aggregated any operating segments in determining our reporting segments.

The Management Team uses underlying measures as the principal basis for allocating resources to and assessing the financial performance of the Group's businesses. Underlying revenue is therefore the measure of segment revenue and underlying operating profit/loss is the measure of segment profit/loss that is presented in the Group's segment disclosures.

Segment revenue and profit or loss

Underlying performance measures exclude specific items of income or expense that are recognised in profit or loss reported in accordance with IFRS that we consider hinder comparison of the financial performance of our businesses from one period to another, with each other or with other similar businesses. Details of the items excluded from profit or loss reported under IFRS in arriving at the Group's underlying profit or loss for each of the periods presented are set out in the section entitled "Financial performance measures" on pages 190 to 196.

Segment revenue and operating profit/(loss) were as follows:

	Underlying revenue[(1)]			Underlying operating profit/(loss)		
	2020 US$000	Restated 2019 US$000	2018 US$000	**2020 US$000**	Restated 2019 US$000	2018 US$000
Custom Mixed Signal	**804,699**	962,476	1,042,320	**230,084**	282,617	267,589
Advanced Mixed Signal	**274,593**	253,415	244,536	**27,874**	15,236	26,754
Connectivity & Audio	**195,540**	183,781	154,004	**15,065**	21,607	13,636
Industrial IoT	**65,389**	2,312	–	**(706)**	(676)	–
Total segments	**1,340,221**	1,401,984	1,440,860	**272,317**	318,784	307,979
Corporate and other unallocated items[(2)]	**35,703**	18,505	1,278	**25,055**	5,565	(26,351)
Total Group	**1,375,924**	1,420,489	1,442,138	**297,372**	324,349	281,628

1 Revenue is from sales to external customers (there were no significant inter-segment sales).

2 Unallocated revenue in 2020 and 2019 is revenue recognised on the effective IP licence granted to Apple (see note 4).

Reconciliation of underlying revenue to revenue reported under IFRS

	2020 US$000	2019 US$000	2018 US$000
Underlying revenue	**1,375,924**	1,420,489	1,442,138
Perpetual licence fee	**–**	145,750	–
Revenue reported under IFRS	**1,375,924**	1,566,239	1,442,138

Reconciliation of underlying operating profit to profit before income taxes reported under IFRS

	2020 US$000	2019 US$000	2018 US$000
Underlying operating profit	**297,372**	324,349	281,628
Licence and asset transfers to Apple:			
– Perpetual licence fee	**–**	145,750	–
– Gain on transfer of design centre businesses	**–**	15,898	–
Share-based compensation and related expenses	**(60,973)**	(54,656)	(41,653)
Accounting for business combinations:			
– Acquisition-related costs	**(9,145)**	(4,040)	–
– Amortisation of acquired intangible assets	**(36,837)**	(26,113)	(22,629)
– Consumption of the fair value uplift of acquired inventory	**(15,257)**	(1,749)	(3,129)
– Consideration accounted for as compensation expense	**(7,482)**	(1,204)	(1,481)
– Forfeiture of deferred consideration	**55**	116	204
– Remeasurement of contingent consideration	**6,938**	–	878
Integration costs	**(6,490)**	(2,434)	(2,765)
Impairment of goodwill	**(44,900)**	–	–
Cost-reduction initiatives	**(2,406)**	–	–
Corporate transaction costs	**–**	(16,064)	(11,346)
Operating profit reported under IFRS	**120,875**	379,853	199,707
Interest income	**6,086**	21,950	9,883
Interest expense	**(8,173)**	(11,309)	(3,134)
Other finance income/(expense)	**(1,885)**	(5,456)	(10,263)
Profit before income taxes	**116,903**	385,038	196,193

Other segment information

Other segment information on an underlying basis is as follows:

	Custom Mixed Signal US$000	Connectivity & Audio US$000	Advanced Mixed Signal US$000	Industrial IoT US$000	Total segments US$000	Corporate activities US$000	Total Group US$000
Year ended 31 December 2020							
Research and development expenses	**135,233**	**61,915**	**67,454**	**19,395**	**283,997**	**612**	**284,609**
Write-down of inventories	**2,368**	**670**	**1,909**	**(1,202)**	**3,745**	**(2)**	**3,743**
Fixed assets[(1)]:							
– Depreciation/amortisation	**30,549**	**16,186**	**8,893**	**2,999**	**58,627**	**983**	**59,610**
– Loss on disposal	**75**	**133**	**75**	**115**	**398**	**330**	**728**
Year ended 31 December 2019[(2)]							
Research and development expenses	157,298	52,672	63,152	1,195	274,317	2,125	276,442
Write-down of inventories	6,884	738	3,514	–	11,136	(3)	11,133
Fixed assets[(1)]:							
– Depreciation/amortisation	41,259	15,202	8,327	205	64,993	739	65,732
– Loss on disposal	282	3,112	58	–	3,452	992	4,444
Year ended 31 December 2018							
Research and development expenses	185,061	42,180	53,703	–	280,944	13,290	294,234
Write-down of inventories	4,309	279	987	–	5,575	68	5,643
Fixed assets[(1)]:							
– Depreciation/amortisation	42,150	10,362	4,920	–	57,432	524	57,956
– Loss on disposal	788	4	27	–	819	104	923

1 Non-current assets excluding investments and deferred tax assets.

2 Restated to reflect segment reorganisation.

b) Geographic information

	2020 US$000	2019 US$000	2018 US$000
Revenue by destination			
United Kingdom	**1,651**	381	647
Other European countries	**60,244**	38,564	40,816
Mainland China	**715,501**	926,625	1,027,976
Hong Kong	**361,249**	318,850	288,838
Other Asian countries	**180,616**	102,041	72,642
United States of America	**49,284**	173,450	6,152
Rest of the world	**7,379**	6,328	5,067
Total	**1,375,924**	1,566,239	1,442,138

	As at 31 December 2020 US$000	As at 31 December 2019 US$000	As at 31 December 2018 US$000
Non-current assets[(1)] by location			
United Kingdom	**36,448**	40,830	47,909
Germany	**121,596**	131,739	43,511
Netherlands	**63,379**	62,771	56,501
United States of America	**971,494**	563,419	568,755
Korea	**40,789**	45,022	641
Rest of the world	**21,416**	15,964	8,200
Total	**1,255,122**	859,745	725,517

1 Non-current assets excluding investments and deferred tax assets.

c) Information about major customers

During 2020, 2019 and 2018, there was only one customer that accounted for more than 10% of the Group's revenue.

During 2020, revenue from that customer was US$893,288, including licence fees totalling US$35,707, of which US$769,811 was recognised in Custom Mixed Signal, US$87,770 was recognised in Advanced Mixed Signal and US$35,707 was unallocated. During 2019, revenue from that customer was US$1,168,568, including licence fees totalling US$164,234, of which US$1,086,636 was recognised in Custom Mixed Signal, US$63,448 was recognised in Advanced Mixed Signal and US$18,484 was unallocated. During 2018, revenue from that customer was US$1,081,532, of which US$1,015,630 was recognised in Custom Mixed Signal and US$65,902 was recognised in Advanced Mixed Signal.

33. Transactions with related parties

Key management personnel

For the purpose of these disclosures, the Group's key management personnel comprise the Management Team (which includes the Company's Executive Director) and the Company's non-executive Directors.

Compensation of the Group's key management personnel was as follows:

	2020 US$000	2019 US$000	2018 US$000
Short-term employee benefits	**9,681**	9,148	9,196
Post-employment benefits	**284**	310	237
Share-based compensation	**15,229**	11,630	11,952
Total	**25,194**	21,088	21,385

Current members of the Company's Board are identified on pages 86 and 87 and current members of the Management Team are identified on pages 82 and 89.

Statutory information about Directors' remuneration is presented in the Directors' remuneration report on pages 98 to 114.

During 2020, the aggregate emoluments payable to Directors in respect of qualifying services to the Company amounted to US$3,936 (2019: US$3,881; 2018: US$2,947). Share options and awards granted to the Executive Director under long-term incentive plans that have vested or will vest based on the Group's and/or the Executive Director's performance over a period ending during the year had an estimated value on vesting of US$4,167 (2019: US$2,160; 2018: US$1,310).

Advances are made by foreign subsidiaries to the Executive Director and certain other members of the Management Team against foreign taxes arising as a result of business travel that are repaid as and when the relevant tax credits are received. As at 31 December 2020, the aggregate amount outstanding was US$377 (2019: US$1,185). During 2020, the weighted average aggregate amount outstanding was US$1,000 (2019: US$952). No interest is charged on the advances which are treated as a taxable benefit. Details of the advances made to the Executive Director are set out in the Directors' remuneration report on page 106.

Other related party transactions
During 2020, 2019 and 2018, there were no other related party transactions that are required to be disclosed in these financial statements.

34. Subsequent event

Proposed acquisition of Dialog by Renesas
On 8 February 2021, the Directors of the Company and Renesas Electronics Corporation ("Renesas"), a supplier of advanced semiconductor solutions, announced that they have reached agreement on the terms of the acquisition of the entire issued and to be issued share capital of the Company for €67.50 per share in cash, representing a total equity value of approximately €4.9 billion (US$5.9 billion).

Renesas is incorporated in Japan and its shares are listed on the Tokyo Stock Exchange. With an extensive portfolio of microcontrollers, analog, power, and SoC products, Renesas provides the expertise, quality, and comprehensive solutions for a broad range of automotive, industrial, home electronics, office automation and ICT applications.

It is intended that the acquisition will be effected by means of a scheme of arrangement under the UK Companies Act 2006. As such, completion of the transaction will be subject to approval by the Company's shareholders and the court in England & Wales. It will also be subject to regulatory approvals in a number of jurisdictions and other customary closing conditions. Subject to obtaining the necessary approvals and satisfying the other closing conditions, it is expected that the acquisition will become effective during the second half of 2021.

Independent review report to Dialog Semiconductor Plc

Introduction
We have been engaged by the Company to review the condensed set of financial statements in the interim report for the three months ended 2 April 2021 which comprises the condensed consolidated statement of income, the condensed consolidated statement of comprehensive income, the condensed consolidated balance sheet, the condensed consolidated statement of cash flows, the condensed consolidated statement of changes in equity and the related notes 1 to 15. We have read the other information contained in the interim report and considered whether it contains any apparent misstatements or material inconsistencies with the information in the condensed set of financial statements.

Directors' responsibilities
The interim report is the responsibility of, and has been approved by, the Directors. The Directors are responsible for preparing the interim report in accordance with the disclosure requirements of the German Securities Trading Act (WpHG).

The condensed set of financial statements included in this interim report has been prepared in accordance with IAS 34 Interim Financial Reporting as adopted by the European Union.

Our responsibility
Our responsibility is to express to the Company a conclusion on the condensed set of financial statements in the interim report based on our review.

Scope of review
We conducted our review in accordance with International Standard on Review Engagements (UK and Ireland) 2410 Review of Interim Financial Information Performed by the Independent Auditor of the Entity issued by the Auditing Practices Board for use in the United Kingdom. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK) and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion
Based on our review, nothing has come to our attention that causes us to believe that the condensed set of financial statements in the interim report for the three months ended 2 April 2021 is not prepared, in all material respects, in accordance with IAS 34 Interim Financial Reporting as adopted by the European Union and the disclosure requirements of the German Securities Trading Act (WpHG).

Use of our report
Our report is made solely to the Company in accordance with International Standard on Review Engagements (UK and Ireland) 2410 Review of Interim Financial Information Performed by the Independent Auditor of the Entity issued by the Financial Reporting Council. Our work has been undertaken so that we might state to the Company those matters we are required to state to it in an independent review report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company, for our review work, for this report, or for the conclusions we have formed.

Deloitte LLP
Statutory Auditor
Reading, UK

12 May 2021

Condensed consolidated statement of income

For the three months ended 2 April 2021

	Note	**Three months ended 2 April 2021 US$000 (Unaudited)**	Three months ended 27 March 2020 US$000 (Unaudited)
Revenue	3	**365,863**	248,481
Cost of sales		**(184,008)**	(124,676)
Gross profit		**181,855**	123,805
Selling and marketing expenses		**(29,867)**	(23,206)
General and administrative expenses		**(35,390)**	(19,205)
Research and development expenses		**(81,560)**	(72,345)
Other operating income	4	**1,530**	8,467
Operating profit	14	**36,568**	17,516
Interest income		**245**	3,842
Interest expense		**(1,359)**	(2,992)
Other finance income		**1,437**	1,176
Profit before income taxes		**36,891**	19,542
Income tax expense		**(10,777)**	(5,943)
Net income		**26,114**	13,599

Earnings per share (US$)	5		
Basic		**0.38**	0.20
Diluted		**0.36**	0.19
Weighted average number of ordinary shares (in thousands)	5		
Basic		**67,912**	68,545
Diluted		**72,175**	72,383

Condensed consolidated statement of comprehensive income

For the three months ended 2 April 2021

	Three months ended 2 April 2021 US$000 (Unaudited)	Three months ended 27 March 2020 US$000 (Unaudited)
Net income	**26,114**	13,599
Other comprehensive income/(expense) **Items that may be reclassified to profit or loss in subsequent periods**		
Currency translation differences on foreign operations:		
– Loss recognised in the period	**(1,740)**	(4,584)
– Related income tax expense	**(182)**	(54)
Cash flow hedges:		
– Fair value loss recognised on effective hedges in the period	**(3,575)**	(3,397)
– Fair value (gain)/loss transferred to profit or loss in the period	**(2,599)**	1,060
– Related income tax credit	**1,173**	444
	(6,923)	(6,531)
Items that will not be reclassified to profit or loss		
Equity investments:		
– Fair value gain/(loss) in the period	**4,088**	(1,705)
Other comprehensive loss for the period	**(2,835)**	(8,236)
Total comprehensive income for the period	**23,279**	5,363

Condensed consolidated balance sheet

As at 2 April 2021

	Note	**As at 2 April 2021 US$000 (Unaudited)**	As at 31 December 2020* US$000 (Audited)
Assets			
Cash and cash equivalents	7	**533,734**	523,880
Trade and other receivables		**107,311**	120,629
Other current financial assets		**2,173**	8,476
Inventories	8	**142,910**	159,393
Income tax receivables		**14,245**	13,689
Other current assets		**22,482**	18,006
Total current assets		**822,855**	844,073
Goodwill	9	**756,431**	756,838
Other intangible assets	9	**381,940**	390,990
Property, plant and equipment – owned	10	**59,160**	60,728
Property, plant and equipment – leased	10	**40,340**	40,602
Investments		**7,621**	3,533
Other non-current financial assets		**2,235**	2,263
Other non-current assets		**2,099**	3,701
Deferred tax assets		**23,229**	18,790
Total non-current assets		**1,273,055**	1,277,445
Total assets		**2,095,910**	2,121,518
Liabilities and equity			
Trade and other payables		**123,335**	151,847
Lease liabilities		**10,853**	11,767
Other current financial liabilities	11	**37,961**	49,899
Provisions		**5,901**	6,945
Income taxes payable		**7,313**	8,167
Other current liabilities		**105,811**	115,128
Total current liabilities		**291,174**	343,753
Lease liabilities		**32,848**	32,357
Other non-current financial liabilities	11	**12,802**	25,379
Provisions		**3,650**	3,590
Net defined benefit liability		**149**	6
Deferred tax liabilities		**11,626**	12,142
Other non-current liabilities		**40,062**	49,763
Total non-current liabilities		**101,137**	123,237
Ordinary shares		**14,253**	14,253
Share premium account		**403,660**	403,660
Retained earnings		**1,506,739**	1,454,908
Other reserves	13	**(219,237)**	(216,402)
Dialog shares held by employee benefit trusts		**(1,816)**	(1,891)
Total equity		**1,703,599**	1,654,528
Total liabilities and equity		**2,095,910**	2,121,518

* Extracted from the Company's audited consolidated financial statements for the year ended 31 December 2020.

Condensed consolidated statement of cash flows

For the three months ended 2 April 2021

	Note	**Three months ended 2 April 2021 US$000 (Unaudited)**	Three months ended 27 March 2020 US$000 (Unaudited)
Cash flow from operating activities			
Net income		**26,114**	13,599
Non-cash items within net income:			
– Amortisation of intangible assets		**16,650**	13,097
– Depreciation of property, plant and equipment		**9,006**	8,434
– Increase in inventory reserve, net		**840**	1,294
– Share-based compensation expense		**18,897**	11,407
– Deferred licence revenue		**(9,331)**	(8,927)
– Other non-cash items		**(1,828)**	(7,001)
Interest expense/(income), net		**1,114**	(850)
Income tax expense		**10,777**	5,943
Cash generated from operations before changes in working capital		**72,239**	36,996
Changes in working capital:			
– Increase in trade and other receivables		**(11,682)**	(11,919)
– Decrease/(increase) in inventories		**15,643**	(7,839)
– Increase in prepaid expenses		**(1,839)**	(5,155)
– Decrease in trade and other payables		**(29,015)**	(20,554)
– Decrease in provisions		**(978)**	(446)
– Change in other assets and liabilities		**(9,400)**	(16,646)
Cash generated from/(absorbed by) operations		**34,968**	(25,563)
Interest paid		**(731)**	(958)
Interest received		**241**	4,325
Income taxes paid		**(8,486)**	(26,834)
Cash inflow/(outflow) from operating activities		**25,992**	(49,030)
Cash flows from investing activities			
Purchase of property, plant and equipment		**(4,766)**	(2,492)
Purchase of intangible assets		**(720)**	(1,564)
Payments for capitalised development costs		**(7,859)**	(3,887)
Purchase of businesses	6	**(50)**	(457)
Cash outflow from investing activities		**(13,395)**	(8,400)
Cash flows from financing activities			
Capital element of lease payments		**(2,719)**	(2,028)
Repayment of bank loans		**(241)**	(132)
Sale of shares by employee benefit trusts		**40**	27
Cash outflow from financing activities		**(2,920)**	(2,133)
Net cash inflow/(outflow) during the period		**9,677**	(59,563)
Cash and cash equivalents at the beginning of the period		**523,880**	1,024,544
Currency translation differences		**177**	(86)
Cash and cash equivalents at the end of the period	7	**533,734**	964,895

Condensed consolidated statement of changes in equity

For the three months ended 2 April 2021

	Ordinary shares US$000	Share premium account US$000	Retained earnings US$000	Other reserves (note 13) US$000	Dialog shares held by employee benefit trusts US$000	Total US$000
Three months ended 2 April 2021 (Unaudited)						
As at 31 December 2020	**14,253**	**403,660**	**1,454,908**	**(216,402)**	**(1,891)**	**1,654,528**
Net income	**–**	**–**	**26,114**	**–**	**–**	**26,114**
Other comprehensive loss	**–**	**–**	**–**	**(2,835)**	**–**	**(2,835)**
Total comprehensive income/(loss)	**–**	**–**	**26,114**	**(2,835)**	**–**	**23,279**
Other changes in equity:						
– Sale of shares by employee benefit trusts	**–**	**–**	**(35)**	**–**	**75**	**40**
– Share-based compensation, including tax credit of US$6,855	**–**	**–**	**25,752**	**–**	**–**	**25,752**
As at 2 April 2021	**14,253**	**403,660**	**1,506,739**	**(219,237)**	**(1,816)**	**1,703,599**
Three months ended 27 March 2020 (Unaudited)						
As at 31 December 2019	14,204	403,660	1,451,582	(274,729)	(22,133)	1,572,584
Net income	–	–	13,599	–	–	13,599
Other comprehensive loss	–	–	–	(8,236)	–	(8,236)
Total comprehensive income/(loss)	–	–	13,599	(8,236)	–	5,363
Other changes in equity:						
– Share buyback obligation	–	–	(101,149)	–	–	(101,149)
– Sale of shares by employee benefit trusts	–	–	(5,683)	–	5,710	27
– Share-based compensation, net of tax expense of US$(4,147)	–	–	7,260	–	–	7,260
As at 27 March 2020	14,204	403,660	1,365,609	(282,965)	(16,423)	1,484,085

Notes to the condensed consolidated financial statements

For the three months ended 2 April 2021

1. Background

Description of business
Dialog Semiconductor Plc ('the Company') is a public limited company that is incorporated in England and Wales and domiciled in the United Kingdom. The Company's ordinary shares are listed on the Frankfurt Stock Exchange.

Dialog creates and markets mixed signal integrated circuits, optimised for personal, portable, hand-held devices, low energy short-range wireless, backlighting and LED solid-state lighting, industrial and automotive applications. Dialog has four reporting segments: Custom Mixed Signal; Advanced Mixed Signal; Connectivity & Audio; and Industrial IoT. Segment information is presented in note 14.

Registered office
The Company's registered office is at Tower Bridge House, St Katharine's Way, London E1W 1AA, United Kingdom.

Statement of compliance
The interim financial statements of the Company and its subsidiaries (together, "Dialog" or the "Group") on pages 13 to 28 have been prepared in accordance with IAS 34 Interim Financial Reporting as adopted by the European Union and the disclosure requirements of the German Securities Trading Act (WpHG).

Basis of preparation
The interim financial statements have been prepared on a going concern basis and in accordance with the historical cost convention, except that certain investments and derivative financial instruments are stated at their fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Information about assets and liabilities that are measured at fair value is presented in note 11.

The Group's significant accounting policies are unchanged compared with the year ended 31 December 2020 (see pages 129 to 136 of our Annual Report and Accounts 2020).

The interim financial statements have been prepared using the same principles for recognising assets, liabilities, income and expenses as are used in preparing the Group's annual financial statements, except that, as required by IAS 34, the income tax expense is calculated by applying the estimated effective income tax rate for the current financial year to the year-to-date profit before income taxes excluding specific items that distort the effective income tax rate and then by taking into account the tax effect of those specific items.

Going concern
At the time of approving the interim financial statements, the Directors are required to form a judgement as to whether the Group and the Company have adequate resources to continue in operational existence for the foreseeable future. In forming their judgement, the Directors have considered the Group's current financial position, its medium-term plan and its most recent forecast for the current financial year, and the principal risks and uncertainties that it faces. The Directors have also considered the proposed acquisition of the Company by Renesas Electronics Corporation.

At the end of Q1 2021, the Group held cash and cash equivalents of US$534 million and currently has an undrawn committed revolving credit facility of US$150 million. Based on the Group's plan and most recent forecast, the Directors expect that the Group will continue to be cash generative over the next 12 months, even in the downside scenario that they considered regarding the impact of the Covid-19 pandemic. For these reasons, the Directors have adopted the going concern basis in preparing the interim financial statements.

Use of estimates
The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, as well as disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual outcomes could differ from those estimates and assumptions and affect the Group's results in future periods.

Presentation currency
The interim financial statements are presented in US dollars ("US$"), which is the functional currency of the Company. All US dollar amounts are in thousands ("US$000"), except where stated otherwise.

Accounting period
We prepare interim financial statements for the first three, six and nine months of each year that are drawn up to a Friday on or around the end of March, June and September.

These interim financial statements cover the period from 1 January 2021 to 2 April 2021 (“three months ended 2 April 2021” or ‘‘Q1 2021”) with comparative information for the period from 1 January 2020 to 27 March 2020 (“three months ended 27 March 2020” or ‘‘Q1 2020”).

Seasonality of operations
Our business is not highly seasonal but our revenue, particularly in our Custom Mixed Signal business group, is dependent on the spending patterns in the consumer markets in which our major customers operate. As a result, our revenue tends to be higher in the second half of the year when those customers prepare for the major holiday selling seasons around the turn of the calendar year.

Relevant accounting standards adopted during the period
With effect from 1 January 2021, we adopted the Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IFRS 7 and IFRS 16), but this had no immediate impact on the Group’s results or financial position.

Accounting standards issued but not yet adopted
We have not yet adopted the following accounting pronouncements, none of which are expected to have a material impact on the Group’s results or financial position:

- *Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)*
- *Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)*
- *Definition of Accounting Estimates (Amendments to IAS 8)*
- *Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2)*
- *Covid-19-Related Rent Concessions beyond 30 June 2021 (Amendment to IFRS 16)*

Review and approval of the interim financial statements
The interim financial statements are unaudited, but have been reviewed by the Company’s auditor, Deloitte LLP, whose report can be found on page 12. The interim financial statements do not constitute statutory accounts within the meaning of section 434(3) of the Companies Act 2006. The Company’s audited statutory accounts for the year ended 31 December 2020 have been delivered to the Registrar of Companies in England and Wales. The auditor’s report on those accounts was unqualified, did not draw attention to any matters by way of emphasis and did not contain a statement under section 498 (2) or (3) of the Companies Act 2006.

The interim financial statements were approved by the Board of Directors on 12 May 2021.

2. Proposed acquisition of Dialog by Renesas

On 8 February 2021, the Directors of the Company and Renesas Electronics Corporation (“Renesas”), a supplier of advanced semiconductor solutions, announced that they have reached agreement on the terms of the acquisition of the entire issued and to be issued share capital of the Company for €67.50 per share in cash, representing a total equity value of approximately €4.9 billion (US$5.9 billion).

Renesas is incorporated in Japan and its shares are listed on the Tokyo Stock Exchange. With an extensive portfolio of microcontrollers, analog, power and SoC products, Renesas provides the expertise, quality and comprehensive solutions for a broad range of automotive, industrial, home electronics, office automation and ICT applications.

It is intended that the acquisition will be effected by means of a scheme of arrangement under the UK Companies Act 2006, as set out in the Scheme Document published on 8 March 2021. On 9 April 2021, the transaction was approved by the Company’s shareholders. Completion of the transaction remains subject to approval of the scheme of arrangement by the court in England & Wales, regulatory approvals in a number of jurisdictions and other customary closing conditions. Subject to obtaining the necessary approvals and satisfying the other closing conditions, it is expected that the acquisition will become effective during the second half of 2021.

During Q1 2021, we recognised initial transaction costs totalling US$9,541 (within general and administrative expenses). As shown in the Scheme Document, we expect to incur significant additional fees and expenses in relation to the transaction.

3. Revenue

Revenue may be analysed as follows:

	Three months ended 2 April 2021 US$000	Three months ended 27 March 2020 US$000
Sale of products:		
– Sales direct to end-customers	**211,584**	165,108
– Sales to distributors	**140,099**	74,260
Total sale of products	**351,683**	239,368
Product and IP development services	**2,850**	–
Licensing agreements with Apple:		
– Effective licence fee	**9,331**	8,927
Other licence fees and royalties	**1,999**	186
Total revenue	**365,863**	248,481

4. Other operating income

Other operating income comprised:

	Three months ended 2 April 2021 US$000	Three months ended 27 March 2020 US$000
Contributions to product development costs	**1,500**	2,706
Change in estimate of contingent consideration (note 6)	**–**	5,347
Rental and other income	**30**	414
Total	**1,530**	8,467

5. Earnings per share

Basic earnings per share amounts are calculated by dividing the profit for the period attributable to holders of ordinary shares in the Company by the weighted average number of ordinary shares outstanding during the period.

Diluted earnings per share amounts are calculated by dividing the profit attributable to holders of ordinary shares in the Company by the weighted average number of ordinary shares outstanding during the period plus the weighted average number of ordinary shares that would be issued if all the securities or other contracts to issue ordinary shares were exercised.

Profit attributable to shareholders in the Company and the weighted average number of ordinary shares for calculating basic and diluted earnings per share were calculated as follows:

		Three months ended 2 April 2021 US$000	Three months ended 27 March 2020 US$000
Profit attributable to shareholders in the Company			
For calculating basic and diluted earnings per share	a	**26,114**	13,599
Weighted average number of ordinary shares			
Average number of shares in issue during the period		**76,682,139**	76,382,139
Deduct:			
Average number of shares held by employee benefit trusts		**(3,356,382)**	(760,548)
Average number of treasury shares		**(5,413,452)**	(7,076,747)
For calculating basic earnings per share	b	**67,912,305**	68,544,844

		Three months ended 2 April 2021 US$000	Three months ended 27 March 2020 US$000
Add:			
Average number of dilutive share options and awards		**4,262,487**	3,838,585
For calculating diluted earnings per share	c	**72,174,792**	72,383,429
Earnings per share (US$)			
Basic	a/b	**0.38**	0.20
Diluted	a/c	**0.36**	0.19

6. Business combinations

Consideration payable for Adesto
We completed the acquisition of Adesto Technologies Corporation ("Adesto") on 29 June 2020.

On completion of the acquisition, certain of Adesto's unvested employee options were converted into deferred cash rights and the fair value of those rights was apportioned between a deferred consideration element and a future compensation element. During Q1 2021, we paid US$35 in settlement of vested deferred consideration. As at 2 April 2021, we held a liability of US$117 in relation to the remaining deferred consideration that is payable over the period to July 2024.

Consideration payable for Creative Chips
We completed the acquisition of Creative Chips GmbH ("Creative Chips") on 31 October 2019.

On completion, we paid initial consideration of US$83,722 in cash, including US$3,722 in respect of Creative Chips' estimated cash, debt and working capital levels on completion. In February 2020, we paid a purchase price adjustment of US$84 to the sellers reflecting Creative Chips' actual cash, debt and working capital levels on completion.

Additional consideration of up to US$23,000 in cash was payable contingent on Creative Chips' performance against revenue targets for 2020 and 2021 and the achievement of certain product development targets by the end of 2020. During Q1 2020, we remeasured the fair value based on Creative Chips' latest forecast revenue for 2020 and recognised a resulting credit of US$5,347 in profit or loss (within other operating income). Later during 2020, it became apparent that the product development targets would not be met and we therefore reduced the contingent consideration liability to US$nil and recognised a further credit of US$1,591 in profit or loss.

Consideration payable for Silego
We completed the acquisition of Silego Technology Inc. ("Silego") on 1 November 2017.

On completion of the acquisition, Silego's unvested employee options were converted into deferred cash rights and the fair value of those rights was apportioned between a deferred consideration element and a future compensation element. During Q1 2021, we paid US$15 (Q1 2020: US$373) in settlement of vested deferred consideration. As at 2 April 2021, we held a liability of US$4 in relation to the remaining deferred consideration that has since been settled.

Cash flow in relation to business combinations
During the periods presented, the cash outflow on the purchase of businesses was as follows:

	Three months ended 2 April 2021 US$000	Three months ended 27 March 2020 US$000
Purchase price adjustment	**–**	84
Deferred consideration	**50**	373
Cash outflow on purchase of businesses	**50**	457

7. Cash and cash equivalents

Cash and cash equivalents may be analysed as follows:

	As at 2 April 2021 US$000	As at 31 December 2020 US$000
Cash at bank	**14,845**	24,315
Cash available from receivables financing facilities	**44,353**	74,232
Bank deposits	**250,000**	170,000
Money market funds	**223,300**	254,000
Cash held by employee benefit trusts	**1,236**	1,333
Total	**533,734**	523,880

As at 2 April 2021 and 31 December 2020, no amounts had been drawn from the cash available from receivables financing facilities.

8. Inventories

Inventories were as follows:

	As at 2 April 2021 US$000	As at 31 December 2020 US$000
Raw materials	**18,503**	21,749
Work in progress	**69,617**	72,426
Finished goods	**54,790**	65,218
Total	**142,910**	159,393

9. Goodwill and other intangible assets

Movements on goodwill and other intangible assets during Q1 2021 may be summarised as follows:

	Goodwill US$000	**Other intangible assets US$000**
Carrying amount		
As at 31 December 2020	**756,838**	**390,990**
Additions	**–**	**8,579**
Amortisation charge for the period	**–**	**(16,650)**
Currency translation differences	**(407)**	**(979)**
As at 2 April 2021	**756,431**	**381,940**

Our annual goodwill impairment tests performed during November 2020 showed that, with the exception of Industrial IoT, the recoverable amount of each operating segment to which goodwill is allocated was comfortably in excess of its carrying amount.

We performed our usual quarterly goodwill impairment review at the end of Q1 2021. Our review did not reveal any impairment of goodwill and we estimate that the excess of Industrial IoT's recoverable amount over its carrying amount had increased from US$105.5 million to US$150.7 million at the end of Q1 2021, principally due to a decrease in the applicable discount rate during Q1 2021.

10. Property, plant and equipment

Movements on property, plant and equipment during Q1 2021 may be summarised as follows:

	Owned US$000	Leased US$000
Carrying amount		
As at 31 December 2020	**60,728**	**40,602**
Additions	**4,766**	**3,233**
Depreciation charge for the period	**(5,923)**	**(3,083)**
Disposals	**(271)**	**–**
Other movements	**–**	**(28)**
Currency translation differences	**(140)**	**(384)**
As at 2 April 2021	**59,160**	**40,340**

11. Additional disclosures on financial instruments

Analysis by class and category

In the following table, the carrying amounts of the financial assets and financial liabilities held by the Group as at 2 April 2021 are analysed by class and category:

	Amortised cost US$000	At fair value through profit and loss US$000	At fair value in designated hedges US$000	At fair value through other comprehensive income US$000	Carrying amount US$000	Fair value US$000
Financial assets						
Cash and deposits	**310,434**	**–**	**–**	**–**	**310,434**	**310,434**
Money market funds	**–**	**223,300**	**–**	**–**	**223,300**	**223,300**
Cash and cash equivalents	**310,434**	**223,300**	**–**	**–**	**533,734**	**533,734**
Trade and other receivables	**107,311**	**–**	**–**	**–**	**107,311**	**107,311**
Energous shares	**–**	**–**	**–**	**7,220**	**7,220**	**7,220**
Semitech shares	**–**	**–**	**–**	**401**	**401**	**401**
Investments	**–**	**–**	**–**	**7,621**	**7,621**	**7,621**
Currency derivatives	**–**	**–**	**2,038**	**–**	**2,038**	**2,038**
Restricted cash	**135**	**–**	**–**	**–**	**135**	**135**
Rental and other deposits	**2,235**	**–**	**–**	**–**	**2,235**	**2,235**
Other financial assets	**2,370**	**–**	**2,038**	**–**	**4,408**	**4,408**
Total financial assets	**420,115**	**223,300**	**2,038**	**7,621**	**653,074**	**653,074**
Financial liabilities						
Trade and other payables	**(123,335)**	**–**	**–**	**–**	**(123,335)**	**(123,335)**
Lease liabilities	**(43,701)**	**–**	**–**	**–**	**(43,701)**	**(46,120)**
Prepayment from Apple	**(48,838)**	**–**	**–**	**–**	**(48,838)**	**(49,646)**
Bank loans	**(833)**	**–**	**–**	**–**	**(833)**	**(833)**
Currency derivatives	**–**	**–**	**(971)**	**–**	**(971)**	**(971)**
Deferred consideration	**(121)**	**–**	**–**	**–**	**(121)**	**(121)**
Other financial liabilities	**(49,792)**	**–**	**(971)**	**–**	**(50,763)**	**(51,571)**
Total financial liabilities	**(216,828)**	**–**	**(971)**	**–**	**(217,799)**	**(221,026)**

Fair value measurement

a) Financial instruments carried at fair value
All financial instruments that are carried at fair value are revalued on a recurring basis. We have not designated any financial instruments at fair value through profit or loss on initial recognition.

We measure the fair value of these financial assets using the following methods and assumptions:

- Investments in money market funds – based on the net asset value of the funds;
- Energous shares (listed on NASDAQ) – measured at the quoted bid price at the close of business on the balance sheet date; and
- Semitech shares (unlisted) – measured by reference to the market value of comparable companies as a multiple of their revenues.

We measure the fair value of currency derivatives as the present value of the future contractual cash flows, which is estimated using observable spot exchange rates and by applying a discount rate that is based on the yield curves of the respective currencies and reflects the credit risk of the counterparties.

In the following table, the financial instruments that were carried at fair value as at 2 April 2021 are categorised into one of three levels in a fair value hierarchy according to the nature of the significant inputs to the valuation techniques that are used to determine their fair value as follows:

- Level 1 – Quoted (unadjusted) market prices in active markets for identical assets or liabilities.
- Level 2 – Inputs other than Level 1 that are observable either directly (as market prices) or indirectly (derived from market prices).
- Level 3 – Unobservable inputs, such as those derived from internal models or using other valuation methods.

	Level 1 US$000	Level 2 US$000	Level 3 US$000	Total US$000
Financial assets carried at fair value				
Cash and cash equivalents				
– Money market funds	**223,300**	**–**	**–**	**223,300**
Investments:				
– Energous shares	**7,220**	**–**	**–**	**7,220**
– Semitech shares	**–**	**–**	**401**	**401**
Derivative financial instruments:				
– Currency derivatives	**–**	**2,038**	**–**	**2,038**
Total financial assets carried at fair value	**230,520**	**2,038**	**401**	**232,959**
Financial liabilities carried at fair value				
Derivative financial instruments:				
– Currency derivatives	**–**	**(971)**	**–**	**(971)**
Total financial liabilities carried at fair value	**–**	**(971)**	**–**	**(971)**

During Q1 2021, there were no transfers between Level 1 and Level 2 and there was no change in the fair value of the Semitech shares (Level 3).

b) Financial instruments not carried at fair value
We have calculated the fair value of the non-interest bearing prepayment from Apple by discounting the future scheduled recoupments based upon the observable yield curve at the balance sheet date for US dollar-denominated debt with an equivalent risk profile (Level 2).

We have calculated the fair value of lease liabilities by discounting the future lease payments at incremental borrowing rates based on observable yield curves at the balance sheet date and, where the lease payments are denominated in a foreign currency, by translating the resulting present values into US dollars using the relevant currency exchange rate at the balance sheet date (Level 2).

Other financial assets and financial liabilities that are not carried at fair value are of short maturity and/or bear interest at floating rates. We therefore consider that their carrying amounts approximate to their fair values (Level 2).

12. Share-based compensation

The Company operates a number of share-based compensation plans under which it grants options and awards over its ordinary shares to certain of the Group's employees.

Development of plans
Movements in the total number of options and conditional share awards outstanding during Q1 2021 were as follows:

	Options	**Weighted average exercise price €**
Outstanding at the beginning of the period	**4,749,039**	**0.08**
Granted	**457,999**	**0.06**
Exercised	**(574,720)**	**0.06**
Forfeited	**(202,886)**	**0.10**
Outstanding at the end of the period	**4,429,432**	**0.08**
Options exercisable at the end of the period	**557,481**	**0.14**

Shares held by employee benefit trusts
The Company provides finance to two trusts to purchase its ordinary shares in order to meet its obligations under its share-based compensation plans. As at 2 April 2021, the trusts held 3,055,389 ordinary shares (as at 31 December 2020: 3,630,109 ordinary shares).

Movements in the number of shares held by the trusts during Q1 2021 were as follows:

	Number of shares	**Cost US$000**
At the beginning of the period	**3,630,109**	**1,891**
Sale or transfer of shares	**(574,720)**	**(75)**
At the end of the period	**3,055,389**	**1,816**

13. Other reserves

Movements on other reserves were as follows:

	Capital redemption reserve US$000	Currency translation reserve US$000	Fair value reserve US$000	Hedging reserve US$000	Treasury shares US$000	Total US$000
Three months ended 2 April 2021						
As at 31 December 2020	**1,020**	**1,597**	**(21,868)**	**5,866**	**(203,017)**	**(216,402)**
Other comprehensive income/(expense):						
– Currency translation differences on foreign operations	**–**	**(1,740)**	**–**	**–**	**–**	**(1,740)**
– Fair value gain on equity investments	**–**	**–**	**4,088**	**–**	**–**	**4,088**
– Cash flow hedges:						
Fair value loss recognised on effective hedges	**–**	**–**	**–**	**(3,575)**	**–**	**(3,575)**
Fair value gain transferred to profit or loss	**–**	**–**	**–**	**(2,599)**	**–**	**(2,599)**
– Income tax (expense)/credit	**–**	**(182)**	**–**	**1,173**	**–**	**991**
As at 2 April 2021	**1,020**	**(325)**	**(17,780)**	**865**	**(203,017)**	**(219,237)**
Three months ended 27 March 2020						
As at 31 December 2019	571	(1,376)	(21,921)	(216)	(251,787)	(274,729)

	Capital redemption reserve US$000	Currency translation reserve US$000	Fair value reserve US$000	Hedging reserve US$000	Treasury shares US$000	Total US$000
Other comprehensive income/(expense):						
– Currency translation differences on foreign operations	–	(4,584)	–	–	–	(4,584)
– Fair value loss on equity investments	–	–	(1,705)	–	–	(1,705)
– Cash flow hedges:						
Fair value loss recognised on effective hedges	–	–	–	(3,397)	–	(3,397)
Fair value loss transferred to profit or loss	–	–	–	1,060	–	1,060
– Income tax (expense)/credit	–	(54)	–	444	–	390
As at 27 March 2020	571	(6,014)	(23,626)	(2,109)	(251,787)	(282,965)

14. Segment information

Background

Segment information is presented in the financial statements on a basis consistent with the information presented to the Management Team (the "chief operating decision-maker") for the purposes of allocating resources within the Group and assessing the performance of the Group's businesses.

The Group's reporting segments are determined based on the nature of the products that they provide to our customers.

Prior to the acquisition of Adesto at the beginning of the third quarter of 2020, the Group had three reporting segments: Custom Mixed Signal; Advanced Mixed Signal; and Connectivity & Audio. Custom Mixed Signal included our Industrial Mixed Signal business unit. We initially managed Adesto on a stand-alone basis and reported its results separately to the Management Team. During the fourth quarter of 2020, we changed the Group's internal reporting structure, bringing together Adesto and the Industrial Mixed Signal business unit to form a single operating segment that we named Industrial IoT. The Group therefore now has four reporting segments: Custom Mixed Signal; Advanced Mixed Signal; Connectivity & Audio; and Industrial IoT:

- Custom Mixed Signal provides custom ICs designed to meet the needs of our customers in the mobile, automotive, computing and storage markets;
- Advanced Mixed Signal provides standard products including CMICs, AC/DC converter solutions for smaller, fast charging power adaptors for portable devices as well as LED drivers for backlighting and solid state lighting products;
- Connectivity & Audio provides standard products incorporating short-range wireless, digital cordless, Bluetooth® low energy, audio and low-power Wi-Fi technologies; and
- Industrial IoT provides products enabling smart factory and building automation including non-volatile memory ("NVM") ICs, industrial communication ICs, custom-designed ASICs and embedded systems, servers and software.

Comparative information for Q1 2020 has been restated to reflect the transfer of the Industrial Mixed Signal business unit from Custom Mixed Signal to Industrial IoT.

Each of the Group's operating segments has a manager who is responsible for its performance and is accountable to the Chief Executive Officer. Custom Mixed Signal comprises our Custom Mixed Signal business group and our Automotive business unit, both of which meet the definition of an operating segment but have been aggregated because they have similar economic characteristics and each provides custom products to similar types of customers through similar distribution channels. Otherwise, we have not aggregated any operating segments in determining our reporting segments.

The Management Team uses underlying measures as the principal basis for allocating resources to and assessing the financial performance of the Group's businesses. Underlying revenue is therefore the measure of segment revenue and underlying operating profit/loss is the measure of segment profit/loss that is now presented in the Group's segment disclosures.

Segment revenue and profit or loss

Underlying performance measures exclude specific items of income or expense that are recognised in profit or loss reported in accordance with IFRS that we consider hinder comparison of the financial performance of our businesses from one period to another, with each other or with other similar businesses. Details of the items excluded from profit or loss reported under IFRS in arriving at the Group's underlying profit for each of the periods presented are set out in Section 3 of this Interim Report.

Segment revenue and operating profit/(loss) were as follows:

	Underlying revenue(1)		Underlying operating profit/(loss)	
	Three months ended 2 April 2021 US$000	Restated Three months ended 27 March 2020 US$000	**Three months ended 2 April 2021 US$000**	Restated Three months ended 27 March 2020 US$000
Custom Mixed Signal	**187,691**	147,825	**52,529**	29,744
Advanced Mixed Signal	**80,801**	51,528	**12,130**	55
Connectivity & Audio	**57,039**	34,716	**8,607**	(3,238)
Industrial IoT	**30,998**	5,485	**(800)**	341
Total segments	**356,529**	239,554	**72,466**	26,902
Corporate and other unallocated items(2)	**9,334**	8,927	**6,693**	6,107
Total Group	**365,863**	248,481	**79,159**	33,009

(1) Revenue is from sales to external customers (there were no inter-segment sales).
(2) Unallocated revenue arises from the effective IP licence granted to Apple.

Reconciliation of underlying revenue to revenue reported under IFRS

During the periods presented, there were no differences between underlying revenue and revenue reported under IFRS.

Reconciliation of underlying operating profit to profit before income taxes reported under IFRS

	Three months ended 2 April 2021 US$000	Three months ended 27 March 2020 US$000
Underlying operating profit	**79,159**	33,009
Share-based compensation and related costs	**(21,393)**	(10,232)
Accounting for business combinations:		
– Acquisition-related costs	**–**	(2,419)
– Amortisation of acquired intangible assets	**(10,461)**	(7,163)
– Consumption of the fair value uplift of acquired inventory	**–**	(712)
– Consideration accounted for as compensation expense	**(57)**	(260)
– Forfeiture of deferred consideration	**–**	23
– Remeasurement of contingent consideration	**–**	5,347
Integration costs	**(904)**	(77)
Cost-reduction initiatives	**(235)**	–
Corporate transaction costs	**(9,541)**	–
Operating profit reported under IFRS	**36,568**	17,516
Interest income	**245**	3,842
Interest expense	**(1,359)**	(2,992)
Other finance income	**1,437**	1,176
Profit before income taxes	**36,891**	19,542

15. Subsequent event

Capacity reservation agreement

On 26 April 2021, we entered into a capacity reservation agreement to secure our projected medium-term silicon wafer requirements from one of our foundry suppliers. We committed to take or pay for minimum wafer volumes over the remainder of 2021 and for the following four calendar years at an expected cost of approximately US$13 million in 2021, increasing to a maximum of approximately US$35 million each calendar year by 2023.

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