IMPORTANT NOTICE

THE SECURITIES DESCRIBED HEREIN ARE AVAILABLE ONLY TO INVESTORS WHO ARE EITHER (1) QIBs (AS DEFINED BELOW) UNDER RULE 144A OF THE SECURITIES ACT (AS DEFINED BELOW), (2) INSTITUTIONAL ACCREDITED INVESTORS (AS DEFINED BELOW) WHO AGREE TO PURCHASE THE SECURITIES FOR THEIR OWN ACCOUNT AND NOT WITH A VIEW TO THE DISTRIBUTION THEREOF OR (3) ADDRESSEES WHO ARE NON-U.S. PERSONS (AS DEFINED BELOW) PURCHASING THE SECURITIES OUTSIDE THE UNITED STATES IN AN OFFSHORE TRANSACTION IN RELIANCE ON REGULATION S UNDER THE SECURITIES ACT.

IMPORTANT: You must read the following before continuing. The following applies to the offering memorandum dated May 4, 2022 (the "**Offering Memorandum**") following this page. You are therefore advised to read this carefully before reading, accessing or making any other use of the Offering Memorandum. In accessing the Offering Memorandum, 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.

NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER OF SECURITIES FOR SALE IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO. 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 UNITED STATES, 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. NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER OF SECURITIES FOR SALE IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO.

THE SECURITIES MAY NOT BE OFFERED, SOLD OR DELIVERED, DIRECTLY OR INDIRECTLY, IN THE REPUBLIC OF KOREA ("**KOREA**") OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, ANY RESIDENT OF KOREA (AS SUCH TERM IS DEFINED UNDER THE FOREIGN EXCHANGE TRANSACTIONS ACT OF KOREA AND ITS ENFORCEMENT DECREE), EXCEPT AS OTHERWISE PERMITTED UNDER APPLICABLE KOREAN LAWS AND REGULATIONS.

THE FOLLOWING OFFERING MEMORANDUM 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 DOCUMENT IN WHOLE OR IN PART IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS DIRECTIVE 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 AND WILL NOT BE ABLE TO PURCHASE ANY OF THE SECURITIES DESCRIBED THEREIN.

Confirmation and your Representation: In order to be eligible to view this Offering Memorandum or make an investment decision with respect to the securities, investors must be either (1) qualified institutional buyers ("**QIBs**") (within the meaning of Rule 144A under the Securities Act), (2) "accredited investors" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions ("**Institutional Accredited Investors**") who agree to purchase the securities for their own account and not with a view to the distribution thereof or (3) addressees who are not U.S. persons (within the meaning of Regulation S under the Securities Act) ("**non-U.S. persons**") purchasing the securities outside the United States in an offshore transaction in reliance on Regulation S under the Securities Act. By accepting the e-mail and accessing this Offering Memorandum, you shall be deemed to have represented to us that (1) you are acting on behalf of, or you are, either (a) QIBs or (b) Institutional Accredited Investors or (c) the electronic mail address that you gave us and to which this e-mail has been delivered is not located in the United States, its territories or possessions and (2) that you consent to delivery of such Offering Memorandum by electronic transmission.

You are reminded that this Offering Memorandum has been delivered to you on the basis that you are a person into whose possession this Offering Memorandum may be lawfully delivered in accordance with the laws of the jurisdiction in which you are located and you may not, nor are you authorized to, deliver or disclose the contents of this Offering Memorandum to any other person.

The materials relating to the offering of securities to which the attached Offering Memorandum relates do not constitute, and may not be used in connection with, an offer or solicitation in any place where offers or solicitations are not permitted by law. If a jurisdiction requires that the offering be made by a licensed broker or dealer and the dealers or any affiliate of the dealers is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by the dealers or such affiliate on behalf of the Issuer (as defined in the attached Offering Memorandum) in such jurisdiction.

This Offering Memorandum 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 Arranger and the Dealers named in this Offering Memorandum, nor any person who controls any of them nor any director, officer, employee nor agent of any of them or affiliate of any such person accepts any liability or responsibility whatsoever in respect of any difference between the Offering Memorandum distributed to you in electronic format and the hard copy version available to you on request from the Arranger and the Dealers.

You should not reply by e-mail to this distribution, and you may not purchase any securities by doing so. Any reply e-mail communications, including those you generate by using the "Reply" function on your e-mail software, will be ignored or rejected. You are responsible for protecting against viruses and other destructive items. Your use of this e-mail 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 MEMORANDUM

Korea Expressway Corporation

(a statutory juridical corporation organized under the laws of the Republic of Korea)

US$3,500,000,000

Global Medium Term Note Program

This Offering Memorandum supersedes and replaces in its entirety the offering memorandum dated May 3, 2021, in relation to the US$3,500,000,000 Global Medium Term Note Program (as updated from time to time, the "Program") of Korea Expressway Corporation (formerly Korea Highway Corporation, and hereinafter referred to as the "Issuer"). Under the Program, the Issuer may from time to time issue notes in bearer and/or registered form (respectively, "Bearer Notes" and "Registered Notes," and together the "Notes") denominated in any currency agreed between the Issuer and the relevant Dealer (as defined below).

The maximum aggregate nominal amount of all Notes from time to time outstanding under the Program will not exceed US$3,500,000,000 (or its equivalent in other currencies calculated as described herein).

The Notes may be issued on a continuing basis to one or more of the Dealers specified under "Summary of the Program" and any additional Dealer appointed under the Program from time to time by the Issuer (each a "Dealer" and together the "Dealers"), which appointment may be for a specific issue or on an ongoing basis. References in this Offering Memorandum to the "relevant Dealer" shall, in the case of an issue of Notes being (or intended to be) subscribed by more than one Dealer, be to all Dealers agreeing to purchase such Notes.

Approval in-principle has been received from the Singapore Exchange Securities Trading Limited (the "Singapore Stock Exchange") in connection with the Program and application will be made for the listing and quotation of Notes that may be issued pursuant to the Program and which are agreed at or prior to the time of issue thereof to be so listed on the Singapore Stock Exchange. Such permission will be granted when such Notes have been admitted for listing and quotation on the Singapore Stock Exchange. The Singapore Stock Exchange assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained herein. Approval in-principle from, admission to the Official List of, and listing and quotation of any Notes on, the Singapore Stock Exchange are not to be taken as an indication of the merits of the Issuer, the Program or the Notes. Notice of the aggregate nominal amount of Notes, interest (if any) payable in respect of Notes, the issue price of Notes and any other terms and conditions not contained herein which are applicable to each Tranche (as defined under "Form of the Notes") of Notes will be set out in a pricing supplement (the "Pricing Supplement") a copy of which, with respect to Notes to be listed on the Singapore Stock Exchange, will be submitted to the Singapore Stock Exchange before the date of listing of the Notes of such Tranche.

The Program provides that Notes may be listed or admitted to trading on such other or further stock exchange(s) as may be agreed between the Issuer and the relevant Dealer. The Issuer may also issue unlisted Notes.

See "*Risk Factors*" beginning on page 80 for a discussion of certain factors to be considered in connection with an investment in the Notes.

The Notes have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "Securities Act") and may not be offered or sold in the United States or its possessions, or to, or for the benefit of, U.S. persons (as defined in Regulation S under the Securities Act) unless the Notes are registered under the Securities Act or an exemption from the registration requirements of the Securities Act is available. See "Form of the Notes" for a description of the manner in which Notes will be issued. Registered Notes are subject to certain restrictions on transfer. The Notes will be subject to certain other restrictions on transfer described in "Subscription and Sale and Transfer and Selling Restrictions."

The Notes of each Series (as defined in "Form of the Notes") will be in either bearer form, with or without interest coupons attached, or registered form, without interest coupons attached. Bearer Notes will be issued only outside the United States to non-U.S. persons in reliance on the exemption from registration provided by Regulation S under the Securities Act ("Regulation S") and Registered Notes may be issued both outside the United States to non-U.S. persons in reliance on the exemption from registration provided by Regulation S and within the United States or to U.S. persons in private transactions (i) to "qualified institutional buyers" within the meaning of Rule 144A under the Securities Act ("QIBs") or (ii) to "accredited investors" (as defined in Rule 501 (a)(1), (2), (3) or (7) under the Securities Act) that are institutions ("Institutional Accredited Investors") who agree to purchase the Notes for their own account and not with a view to the distribution thereof. Bearer Notes are subject to U.S. tax law requirements. Subject to certain exceptions, the Notes may not be offered or sold, or in the case of Bearer Notes delivered, in the United States or its possessions or to, or for the benefit of, U.S. persons (as defined in Regulation S under the Securities Act or, in the case of Bearer Notes, the U.S. Internal Revenue Code of 1986, as amended). See "Form of the Notes" for further description of the manner in which Notes will be issued. Notes are subject to certain restrictions on transfer. See "Subscription and Sale and Transfer and Selling Restrictions."

The Issuer may agree with any Dealer that Notes may be issued in a form not contemplated by the Terms and Conditions of the Notes herein, in which event (in the case of Notes intended to be listed on the Singapore Stock Exchange) a supplementary Offering Memorandum, if appropriate, will be submitted to the Singapore Stock Exchange and made available which will describe the effect of the agreement reached in relation to such Notes.

Arranger

Citigroup

Dealers

BofA Merrill Lynch	**BNP PARIBAS**
Citigroup	**HSBC**
J.P. Morgan	**Korea Development Bank**
Morgan Stanley	**Société Générale Corporate & Investment Banking**

UBS

The date of this Offering Memorandum is May 4, 2022.

The Issuer, having made all reasonable enquiries, confirms that this Offering Memorandum contains or incorporates all information which is material in the context of the issuance and offering of Notes, that the information contained or incorporated by reference in this Offering Memorandum is true and accurate in all material respects and is not misleading in any material respect, that the opinions and intentions expressed in this Offering Memorandum are honestly held and that there are no other facts the omission of which would, in the context of the issuance and offering of the Notes, make this Offering Memorandum as a whole or any information or the expression of any opinions or intentions in this Offering Memorandum misleading in any material respect. The Issuer accepts responsibility accordingly.

The Singapore Stock Exchange assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained in this Offering Memorandum. The Singapore Stock Exchange makes no representation as to the accuracy or completeness of any of the statements made, opinions expressed or reports contained herein and expressly disclaims any liability whatsoever for any loss howsoever arising from or in reliance upon the whole or any part of the contents of this Offering Memorandum.

This Offering Memorandum is to be read in conjunction with all documents which are deemed to be incorporated herein by reference (see "Documents Incorporated by Reference" below). This Offering Memorandum shall be read and construed on the basis that such documents are incorporated and form part of this Offering Memorandum.

This Offering Memorandum is based on information provided by the Issuer. Accordingly, no representation, warranty or undertaking, express or implied, is made and no responsibility or liability is accepted by the Dealers as to the accuracy or completeness of the information contained or incorporated by reference in this Offering Memorandum or any other information provided by the Issuer in connection with the Program. No Dealer accepts any liability in relation to the information contained or incorporated by reference in this Offering Memorandum or any other information provided by the Issuer in connection with the Program.

No person is or has been authorized by the Issuer to give any information or to make any representation not contained in or not consistent with this Offering Memorandum or any other information supplied in connection with the Program or the Notes and, if given or made, such information or representation must not be relied upon as having been authorized by the Issuer or any of the Dealers.

Neither this Offering Memorandum nor any other information supplied in connection with the Program or any Notes (i) is intended to provide the basis of any credit or other evaluation or (ii) should be considered as a recommendation or constituting an invitation or offer by the Issuer or any of the Dealers that any recipient of this Offering Memorandum or any other information supplied in connection with the Program or any Notes should purchase any Notes. Each investor contemplating purchasing any Notes should make its own independent investigation of the financial condition and affairs, and its own appraisal of the creditworthiness, of the Issuer. Neither this Offering Memorandum nor any other information supplied in connection with the Program or the issue of any Notes constitutes an offer or invitation by or on behalf of the Issuer or any of the Dealers to any person to subscribe for or to purchase any Notes.

Neither the delivery of this Offering Memorandum nor the offering, sale or delivery of any Notes shall in any circumstances imply that the information contained herein concerning the Issuer is correct at any time subsequent to the date hereof or that any other information supplied in connection with the Program is correct as of any time subsequent to the date indicated in the document containing the same. The Dealers expressly do not undertake to review the financial condition or affairs of the Issuer during the life of the Program or to advise any investor in the Notes of any information coming to their attention. Investors should review, inter alia, the most recently published documents contained in and/or incorporated by reference into this Offering Memorandum when deciding whether or not to purchase any Notes.

This Offering Memorandum does not constitute an offer to sell or the solicitation of an offer to buy any Notes in any jurisdiction to any person to whom it is unlawful to make the offer or solicitation in such jurisdiction. The distribution of this Offering Memorandum and the offer or sale of Notes may be restricted by law in certain jurisdictions. Neither the Issuer nor the Dealers represent that this Offering Memorandum may be lawfully distributed, or that any Notes may be lawfully offered, in compliance with any applicable registration or other requirements in any such jurisdiction, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. In particular, no action has been taken by the Issuer or the Dealers which would permit a public offering of any Notes or distribution of this document in any jurisdiction where action for that purpose is required. Accordingly, no Notes may be offered or sold, directly or indirectly, and neither this Offering Memorandum nor any advertisement or other offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with any applicable laws and regulations. Persons into whose possession this Offering Memorandum or any Notes come must inform themselves about, and observe, any such restrictions on the distribution of this Offering Memorandum and the offering and sale of Notes. In particular, there are restrictions on the distribution of this Offering Memorandum and the offer or sale of Notes in the United States, the European Economic Area, the United Kingdom, Italy, Japan, the Republic of Korea ("**Korea**"), the Republic of Singapore ("**Singapore**"), Switzerland and Hong Kong. See "Subscription and Sale and Transfer and Selling Restrictions."

In making an investment decision, investors must rely on their own examination of the Issuer and the terms of the Notes being offered, including the merits and risks involved. The Notes have not been approved or disapproved by the United States Securities and Exchange Commission or any other securities commission or other regulatory authority in the United States, nor have the foregoing authorities approved this Offering Memorandum or confirmed the accuracy or determined the adequacy of the information contained in this Offering Memorandum. Any representation to the contrary is unlawful.

None of the Dealers or the Issuer makes any representation to any investor in the Notes regarding the legality of its investment under any applicable laws. Any investor in the Notes should be able to bear the economic risk of an investment in the Notes for an indefinite period of time.

There are restrictions on the offer and sale of the Notes in the United Kingdom. All applicable provisions of the Financial Services and Market Act 2000 ("**FSMA**") with respect to anything done by any person in relation to the Notes in, from or otherwise involving the United Kingdom must be complied with. See "Subscription and Sale and Transfer and Selling Restrictions."

MiFID II Product Governance/Target Market

The Pricing Supplement in respect of any Notes may include a legend entitled "MiFID II Product Governance" which will outline the target market assessment in respect of the Notes and which channels for distribution of the Notes are appropriate. Any person subsequently offering, selling or recommending the Notes (a "**distributor**") should take into consideration the target market assessment; however, a distributor subject to Directive 2014/65/EU (as amended, "**MiFID II**") is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the target market assessment) and determining appropriate distribution channels.

A determination will be made in relation to each issue about whether, for the purpose of the MiFID Product Governance rules under EU Delegated Directive 2017/593 (the "**MiFID Product Governance Rules**"), any Dealer subscribing for any Notes is a manufacturer in respect of such Notes, but otherwise neither the Arranger nor the Dealers nor any of their respective affiliates will be a manufacturer for the purpose of the MiFID Product Governance Rules.

UK MiFIR Product Governance/Target Market

The Pricing Supplement in respect of any Notes may include a legend entitled "UK MiFIR Product Governance" which will outline the target market assessment in respect of the Notes and which channels for distribution of the Notes are appropriate. Any person subsequently offering, selling or recommending the Notes (a "**distributor**") should take into consideration the target market assessment; however, a distributor subject to the FCA Handbook Product Intervention and Product Governance Sourcebook (the "**UK MiFIR Product Governance Rules**") is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the target market assessment) and determining appropriate distribution channels.

A determination will be made in relation to each issue about whether, for the purpose of the UK MiFIR Product Governance Rules, any Dealer subscribing for any Notes is a manufacturer in respect of such Notes, but otherwise neither the Arranger nor the Dealers nor any of their respective affiliates will be a manufacturer for the purpose of the UK MiFIR Product Governance Rules.

Prohibition of Sales to EEA Retail Investors

If the Pricing Supplement in respect of any Notes includes a legend entitled "Prohibition of Sales to EEA Retail Investors", the Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area (the "**EEA**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of MiFID II; (ii) a customer within the meaning of Directive (EU) 2016/97 (the "**Insurance Distribution Directive**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (the "**Prospectus Regulation**"). Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the "**PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

Prohibition of Sales to UK Retail Investors

If the Pricing Supplement in respect of any Notes includes a legend entitled "Prohibition of Sales to UK Retail Investors", the Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the United Kingdom ("**UK**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (the "**EUWA**"); (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (the "**FSMA**") and any rules or regulations made under the FSMA to implement the Insurance Distribution Directive, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or (iii) not a qualified investor as defined in Article 2 of the Prospectus Regulation as it forms part of domestic law by virtue of the EUWA. Consequently, no key information document required by the PRIIPs Regulation as it forms part of domestic law by virtue of the EUWA (the "**UK PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.

Notification Under Section 309B(1)(c) of the Securities and Futures Act 2001 of Singapore (The "SFA")

Unless otherwise stated in the Pricing Supplement in respect of any Notes, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes to be issued under the Program are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore (the "**CMP Regulations 2018**")) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

U.S. INFORMATION

This Offering Memorandum may be submitted on a confidential basis in the United States to a limited number of QIBs or Institutional Accredited Investors for informational use solely in connection with the consideration of the purchase of the Notes being offered hereby. Its use for any other purpose in the United States is not authorized. It may not be copied or reproduced in whole or in part nor may it be distributed or any of its contents disclosed to anyone other than the prospective investors to whom it is originally submitted.

The Notes may be offered and sold outside the United States to non-U.S. persons pursuant to Regulation S under the Securities Act ("**Regulation S**"). Registered Notes may be offered or sold within the United States only to QIBs or to Institutional Accredited Investors, in either case in transactions exempt from registration under the Securities Act. Each U.S. purchaser of Registered Notes is hereby notified that the offer and sale of any Registered Notes to it may be being made in reliance upon the exemption from the registration requirements of the Securities Act provided by Rule 144A under the Securities Act ("**Rule 144A**").

Purchasers of Definitive IAI Registered Notes will be required to execute and deliver an IAI Investment Letter (as defined under "Terms and Conditions of the Notes"). Each purchaser or holder of Definitive IAI Registered Notes, Notes represented by a Rule 144A Global Note (as defined under "Terms and Conditions of the Notes") or any Notes issued in registered form in exchange or substitution therefor (together "Legended Notes") will be deemed, by its acceptance or purchase of any such Legended Notes, to have made certain representations and agreements intended to restrict the resale or other transfer of such Notes as set out in "Subscription and Sale and Transfer and Selling Restrictions." Unless otherwise stated, terms used in this paragraph have the meanings given to them in "Form of the Notes."

The Notes in bearer form are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to U.S. persons, except in certain transactions permitted by U.S. tax regulations. Terms used in this paragraph have the meanings given to them by the U.S. Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

AVAILABLE INFORMATION

To permit compliance with Rule 144A in connection with any resales or other transfers of Notes that are "restricted securities" within the meaning of the Securities Act, the Issuer has undertaken in the Program Agreement to furnish, upon the request of a holder of such Notes or any beneficial interest therein, to such holder or to a prospective purchaser designated by him or her, the information required to be delivered under Rule 144A(d)(4) under the Securities Act if, at the time of the request, the Issuer is neither a reporting company under Section 13 or Section 15(d) of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"), nor exempt from reporting pursuant to Rule 12g3-2(b) thereunder.

ENFORCEMENT OF CIVIL LIABILITIES

The Issuer is a statutory juridical corporation organized under the laws of Korea. All of the officers and directors named herein reside in Korea and all or a substantial portion of the assets of the Issuer and of such officers and directors are located in Korea. As a result, it may not be possible for investors to effect service of process outside Korea upon the Issuer or such persons, or to enforce judgments against them obtained in courts outside Korea predicated upon civil liabilities of the Issuer or such directors and officers under laws other than Korean law, including any judgment predicated upon United States federal securities laws. The Issuer has been advised by Lee & Ko, its Korean counsel, that there is doubt as to the enforceability in Korea in original actions or in actions for enforcement of judgments of United States courts of civil liabilities predicated solely upon the federal securities laws of the United States.

PRESENTATION OF FINANCIAL AND OTHER INFORMATION

The Issuer's audited consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021 included in this Offering Memorandum, have been prepared in accordance with the Government Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea ("Government Accounting Standards"), which mandates application of Korean International Financial Reporting Standards ("K-IFRS") where specific accounting treatments are not prescribed by the Government Accounting Standards, which may differ in certain respects from International Financial Reporting Standards ("IFRS") applied in other countries. In making an investment decision, investors must rely upon their own independent examination of the Issuer, the terms of the offering, including the risks involved, and the most recent financial information of the Issuer. Potential investors should consult their own professional advisers for an understanding of the differences between the Government Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea, and IFRS applied in other countries, and how these differences affect the financial information contained in this Offering Memorandum. This Offering Memorandum should not be considered as a recommendation by any of the Dealers that any recipient of this Offering Memorandum should purchase the Notes.

Unless otherwise stated herein, all financial information presented in this offering memorandum relating to the Issuer are presented on a consolidated basis.

CERTAIN DEFINED TERMS AND CONVENTIONS

All references to "we," "our," "us," "ourselves," "our company," "KEC," the "Company" or the "Issuer" herein are references to Korea Expressway Corporation and, as the context may require, its subsidiaries. All references in this document to "Korea" or the "Republic" refer to the Republic of Korea, those to the "Government" refer to the Government of Korea, those to the "MOLIT" refer to the Ministry of Land, Infrastructure and Transport of Korea, and those to the "MOEF" refer to the Ministry of Economy and Finance of Korea.

All references in this document to "Korean Won," "won," "Won" and "₩" refer to the lawful currency of Korea, those to "U.S. Dollars," "U.S. dollars," "US$," "$" and "U.S. cents" refer to the lawful currency of the United States of America, those to "Sterling" and "£" refer to the lawful currency of the United Kingdom, those to "Singapore Dollars," "Singapore dollars" and "S$" refer to the lawful currency of Singapore, those to "Japanese Yen," "Yen" and "¥" refer to the lawful currency of Japan, those to "Hong Kong Dollars" and "HK$" refer to the lawful currency of Hong Kong and those to "C," "Euro" and "euro" refer to the lawful currency of the European Union.

For convenience only, certain Won amounts in this Offering Memorandum have been translated into U.S. dollars. Unless otherwise specified, all such conversions were made at the base rate under the market average exchange system announced by Seoul Money Brokerage Services, Ltd. in Seoul between Won and U.S. dollars (the "Market Average Exchange Rate") in effect on December 31, 2021 which was ₩1,185.5 to US$1.00. Other Won amounts in this Offering Memorandum where translated into U.S. dollars have been converted at the rate as specified therein. No representation is made that the Won or U.S. dollar amounts referred to herein could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate or at all. On May 3, 2022, the Market Average Exchange Rate was ₩1,265.8 to US$1.00. Any discrepancies in any table between totals and the sums of the amounts listed are due to rounding. References to billions are to thousands of millions.

FORWARD-LOOKING STATEMENTS

Certain statements in this Offering Memorandum constitute forward-looking statements, including statements regarding the Issuer's expectations and projections for future operating performance and business prospects. The words "believe," "expect," "anticipate," "estimate," "project," "will," "aim," "will likely result," "will continue," "intend," "plan," "contemplate," "seek to," "future," "objective," "goal," "should," "will pursue" and similar expressions or variations of these expressions identify forward-looking statements. In addition, all statements other than statements of historical facts included in this Offering Memorandum, including, without limitation, those regarding the Issuer's financial position and results, business strategy, plans and objectives of management for future operations, including development plans and objectives relating to the Issuer's products and services, are forward-looking statements. Such forward-looking statements and any other projections contained in this Offering Memorandum (whether made by the Issuer or any third party) involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from the future results, performance or achievements expressed or implied by forward-looking statements. Such forward-looking statements are based on current beliefs, assumptions, expectations, estimates and projections regarding the Issuer's present and future business strategies and the environment in which the Issuer will operate in the future. Among the important factors that could cause some or all of those assumptions not to occur or cause the Issuer's actual results, performance or achievements to differ materially from those in the forward-looking statements, include, among other things, public policy considerations of the Government relating to the nation's transportation network, continued financial support from the Government and the condition of and changes in the Korean, Asian or global economies. Additional factors that could cause the Issuer's actual results, performance or achievements to differ materially include, but are not limited to, those discussed under "Risk Factors." Any forward-looking statements contained in this Offering Memorandum speak only as of the date of this Offering Memorandum. Each of the Issuer and the Dealers expressly disclaims any obligation or undertaking to release, publicly or otherwise, any updates or revisions to any forward-looking statement contained herein to reflect any change in the Issuer's expectations with regard thereto or any change in events, conditions, assumptions or circumstances on which any such statement was based.

In connection with the issue of any Tranche of Notes, the Dealer or Dealers (if any) named as the Stabilizing Manager(s) (or persons acting on behalf of any Stabilizing Manager(s)) in the applicable Pricing Supplement may over-allot Notes or effect transactions with a view to supporting the market price of the Notes at a level higher than that which might otherwise prevail. However, there is no assurance that the Stabilizing Manager(s) (or persons acting on behalf of a Stabilizing Manager) will undertake stabilization action. Any stabilization action may begin on or after the date on which adequate public disclosure of the terms of the offer of the relevant Tranche of Notes is made and, if begun, may be ended at any time, but it must end no later than the earlier of 30 days after the issue date of the relevant Tranche of Notes and 60 days after the date of the allotment of the relevant Tranche of Notes. Any stabilization action or over-allotment must be conducted by the relevant Stabilizing Manager(s) (or person(s) acting on behalf of any Stabilizing Manager(s)) in accordance with all applicable laws and rules.

TABLE OF CONTENTS

DOCUMENTS INCORPORATED BY REFERENCE

THE FOLLOWING DOCUMENTS PUBLISHED OR ISSUED FROM TIME TO TIME AFTER THE DATE HEREOF SHALL BE DEEMED TO BE INCORPORATED IN, AND TO FORM PART OF, THIS OFFERING MEMORANDUM:

(a) the most recently published audited consolidated annual financial statements of the Issuer from time to time (see "General Information" for a description of the financial statements currently published by the Issuer); and

(b) all supplements or amendments to this Offering Memorandum circulated by the Issuer from time to time,

save that any statement contained herein or in a document which is deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purpose of this Offering Memorandum to the extent that a statement contained in any such subsequent document which is deemed to be incorporated by reference herein modifies or supersedes such earlier statement (whether expressly, by implication or otherwise). Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Offering Memorandum.

The Issuer will provide, without charge, to each person to whom a copy of this Offering Memorandum has been delivered, upon the request of such person, a copy of any or all of the documents deemed to be incorporated herein by reference unless such documents have been modified or superseded as specified above. Requests for such documents should be directed to the Issuer at its registered offices set out at the end of this Offering Memorandum. In addition, such documents will be available from the principal office in London of Citibank, N.A., London Branch (the "Principal Paying Agent") for Notes listed on the Singapore Stock Exchange.

The Issuer will, in connection with the listing of the Notes on the Singapore Stock Exchange (so long as the rules of the Singapore Stock Exchange so require), in the event of any material change in the condition of the Issuer which is not reflected in this Offering Memorandum, prepare a supplement to this Offering Memorandum or publish a new Offering Memorandum for use in connection with any subsequent issue of the Notes to be listed on the Singapore Stock Exchange.

If the terms of the Program are modified or amended in a manner which would make this Offering Memorandum, as so modified or amended, inaccurate or misleading, a new Offering Memorandum will be prepared.

GENERAL DESCRIPTION OF THE PROGRAM

Under the Program, the Issuer may from time to time issue Notes denominated in any currency, subject as set out herein. A summary of the terms and conditions of the Program and the Notes appears below. The applicable terms of any Notes will be agreed between the Issuer and the relevant Dealer prior to the issue of the Notes and will be set out in the Terms and Conditions of the Notes endorsed on, or incorporated by reference into, the Notes, as modified and supplemented by the applicable Pricing Supplement attached to, or endorsed on, such Notes, as more fully described under "Form of the Notes."

This Offering Memorandum and any supplement will only be valid for offering the Notes in an aggregate nominal amount which, when added to the aggregate nominal amount then outstanding of all Notes previously or simultaneously issued under the Program, does not exceed US$3,500,000,000 or its equivalent in other currencies. For the purpose of calculating the U.S. dollar equivalent of the aggregate nominal amount of Notes issued under the Program from time to time:

(a) the U.S. dollar equivalent of Notes denominated in another Specified Currency (as specified in the applicable Pricing Supplement in relation to the Notes, described under "Form of the Notes") shall be determined, at the discretion of the Issuer, either as of the date on which agreement is reached for the issue of Notes or on the preceding day on which commercial banks and foreign exchange markets are open for business in London, in each case on the basis of the spot rate for the sale of the U.S. dollar against the purchase of such Specified Currency in the London foreign exchange market quoted by any leading international bank selected by the Issuer on the relevant day of calculation;

(b) the U.S. dollar equivalent of Dual Currency Notes, Index Linked Interest Notes and Partly Paid Notes (each as specified in the applicable Pricing Supplement in relation to the Notes, described under "Form of the Notes") shall be calculated in the manner specified above by reference to the original nominal amount on issue of such Notes (in the case of Partly Paid Notes regardless of the subscription price paid); and

(c) the U.S. dollar equivalent of Zero Coupon Notes (as specified in the applicable Pricing Supplement in relation to the Notes, described under "Form of the Notes") and other Notes issued at a discount or premium shall be calculated in the manner specified above by reference to the net proceeds received by the Issuer for the relevant issue.

SUMMARY OF THE ISSUER

The Issuer is a Government-owned corporation established by the Korea Expressway Corporation Act (the "**KEC Act**") to develop, manage and operate the nation's expressway network. Under the KEC Act, the Issuer is also mandated to develop areas adjacent to expressways and to conduct research and development relating to expressways. The Issuer has the exclusive right to operate and collect tolls on 4,196 kilometers of expressways in Korea, which represented approximately 86.2% of the total kilometers of expressways in Korea as of December 31, 2021. The network under the Issuer's supervision comprises of 33 routes throughout Korea and includes Korea's major road arteries that connect Korea's most populated metropolitan areas, including Seoul, Busan, Incheon, Daegu, Daejeon, Gwangju and Ulsan. As of December 31, 2021, the Issuer operated 356 toll plazas.

The principal source of income for the Issuer is tolls collected from motorists for the use of the expressways managed by the Issuer. The Issuer also receives lease payments from operators of service areas and gas stations located at various points along the expressways. In addition, the Issuer provides, at cost, road construction services (including supervision of Government construction projects along various locations adjacent to expressways) and supporting services (including the purchase and sale on behalf of the Government of land related to expressways) to the Government. The Issuer's revenue from its toll business was ₩4,122 billion, ₩3,964 billion and ₩4,179 billion in 2019, 2020 and 2021, respectively, which represented 47.3%, 41.5% and 39.7% of the Issuer's revenues, or 85.7%, 85.7% and 82.7% of the Issuer's revenues other than from the construction and supporting businesses (which yield no gross profit as the Issuer operates these businesses at cost), in 2019, 2020 and 2021, respectively. Toll revenues are largely dependent on the total traffic volume on the expressways managed by the Issuer, which was 1,660 million, 1,614 million and 1,698 million vehicles in 2019, 2020 and 2021, respectively, while the total registered vehicles in Korea were 24 million, 24 million and 25 million as of December 31, 2019, 2020 and 2021, respectively, according to the Korea National Statistical Office. See "Business – Traffic."

The Government's mandate for the Issuer includes implementation of the Government's National Arterial Expressway Network Plan, adopted in 1991, which sets forth a plan for the construction of Korea's national expressway network. A key component of this plan was the National 7x9+6R Plan, which contemplated construction of 7,331 kilometers of expressways throughout Korea in the form of a grid comprised of seven south-to-north expressways, nine east-to-west expressways and six ring-shaped beltways encircling major cities. This plan was changed to the current National 10x10+6R^2 Plan, which was adopted in 2020 with a target completion timeline of 2030. The National 10x10+6R^2 Plan contemplates construction of 7,783 kilometers of expressways throughout Korea in the form of a grid comprised of ten south-to-north expressways, ten east-to-west expressways and six ring-shaped beltways encircling major cities. 65.8% of the National 10x10+6R^2 Plan, in terms of route kilometers, was completed as of December 31, 2021. As of December 31, 2021, the Issuer had 18 new expressway routes under construction for an aggregate length of 521.7 kilometers and 3 expressway routes under expansion for an aggregate length of 26.3 kilometers.

In light of its mandate to the Issuer, the Government provides substantial financial support to the Issuer for all of its expressway-related projects by way of periodic capital contributions, which is used to defray a substantial portion of the Issuer's costs incurred in the construction of the expressways contemplated in the National 10x10+6R^2 Plan, as well as all of the Issuer's costs incurred in the acquisition of related land. Capital increase by issuing new shares from subscription by the Government in the Issuer amounted to ₩1,448 billion, ₩1,662 billion and ₩2,057 billion in 2019, 2020 and 2021, respectively. With respect to 2022, the Government has budgeted ₩2,396 billion for capital contribution to the Issuer. The Government's capital contribution is generally set at a level to cover approximately 40% of the Issuer's budgeted construction costs and, since 2003, 100% of the Issuer's budgeted costs of acquiring related land.

However, at times, the Government's capital contribution may fall below such level due to budgetary constraints or other public policy considerations. For example, the Government's actual subsidy ratio (defined as the ratio of the Government's capital contributions to the Issuer's actual costs for construction of new expressways and expansions) fell below the 40% level in 2006, 2007, 2008 and 2010. The actual subsidy ratio was 49%, 45% and 49% in 2019, 2020 and 2021, respectively. In respect of 2022, the Issuer budgeted construction costs of ₩4,850 billion and the Government budgeted capital contributions to the Issuer in the amount of ₩2,396 billion. See "Relationship with the Government – Financial Support from the Government."

As of December 31, 2021, approximately 99.9% of the share capital of the Issuer was owned by the Government, with 87.77% held directly and 12.14% held indirectly through The Export-Import Bank of Korea, The Korea Development Bank, Korea Asset Management Corporation and Korea Housing Financing Corporation, all of which were wholly (or, in the case of Korea Asset Management Corporation, approximately 92%) owned (directly or indirectly) by the Government.

The Issuer seeks to improve its overall financial position and capital structure. The Issuer's current funding strategy is to match the cash flow generated from borrowings more closely with anticipated capital expenditures, diversify funding sources and reduce financing costs. In addition, the Issuer has sought, and will continue to seek, increases in toll rates and increases in funding from the Government.

As of December 31, 2021, the Issuer had 8,523 full-time employees, of whom 75.2% were engineers, 22.3% were operations staff and 2.5% were administrative staff.

The Issuer was established in 1969. In 2007, the Issuer changed its English name from "Korea Highway Corporation" to "Korea Expressway Corporation." The Issuer's registered office is 77, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, Korea.

SUMMARY OF THE PROGRAM

The following summary does not purport to be complete and is taken from, and is qualified in its entirety by, the remainder of this Offering Memorandum and, in relation to the terms and conditions of any particular Tranche of Notes, the applicable Pricing Supplement. Words and expressions defined in "Form of the Notes" and "Terms and Conditions of the Notes" below shall have the same meanings in this summary.

Issuer	Korea Expressway Corporation (formerly Korea Highway Corporation).
Description	Global Medium Term Note Program.
Arranger	Citigroup Global Markets Inc.
Dealers	BNP Paribas, Citigroup Global Markets Inc., The Hongkong and Shanghai Banking Corporation Limited, J.P. Morgan Securities plc, The Korea Development Bank, Merrill Lynch International, Morgan Stanley & Co. International plc, Société Générale, UBS AG, Hong Kong Branch and any other Dealers appointed in accordance with the Program Agreement.
Certain Restrictions	Each issue of Notes denominated in a currency in respect of which particular laws, guidelines, regulations, restrictions or reporting requirements apply will only be issued in circumstances which comply with such laws, guidelines, regulations, restrictions or reporting requirements from time to time (see "Subscription and Sale and Transfer and Selling Restrictions"), including the following restriction applicable at the date of this Offering Memorandum. Notes having a maturity of less than one year will, if the proceeds of the issue are accepted in the United Kingdom, constitute deposits for the purposes of the prohibition on accepting deposits contained in Section 19 of FSMA unless they are issued to a limited class of professional investors and have a denomination of at least £100,000 or its equivalent.
Principal Paying Agent, Transfer Agent and Exchange Agent	Citibank, N.A., London Branch.
Registrar	Citigroup Global Markets Europe AG.
Program Size	Up to US$3,500,000,000 (or its equivalent in other currencies calculated as described under "General Description of the Program") in aggregate nominal amount of Notes outstanding at any time. The Issuer may increase the amount of the Program in accordance with the terms of the Program Agreement.

Distribution	Subject to applicable selling restrictions, Notes may be distributed by way of private or public placement and in each case on a syndicated or non-syndicated basis.
Currencies	Subject to any applicable legal or regulatory restrictions, any currency as may be agreed between the Issuer and the relevant Dealer.
Maturities	Such maturities as may be agreed between the Issuer and the relevant Dealer and as indicated in the applicable Pricing Supplement, subject to such minimum or maximum maturities as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the Issuer or the relevant Specified Currency.
Issue Price	Notes may be issued on a fully-paid or a partly-paid basis and at an issue price which is at par or at a discount to, or premium over, par.
Form of Notes	Notes will be issued in bearer or registered form, as described in "Form of the Notes." Registered Notes will not be exchangeable for Bearer Notes and vice versa.
Fixed Rate Notes	Fixed Rate Notes will bear interest payable on such date or dates as may be agreed between the Issuer and the relevant Dealer and on redemption, and will be calculated on the basis of such Day Count Fraction as may be agreed between the Issuer and the relevant Dealer.
Floating Rate Notes	Floating Rate Notes will bear interest at a rate determined either: (i) on the same basis as the floating rate under a notional interest-rate swap transaction in the relevant Specified Currency governed by an agreement incorporating the 2006 ISDA Definitions (as published by the International Swaps and Derivatives Association, Inc., and as amended and updated as at the Issue Date of the first Tranche of the Notes of the relevant Series); or (ii) on the basis of a reference rate appearing on the agreed screen page of a commercial quotation service; or (iii) on such other basis as may be agreed between the Issuer and the relevant Dealer. The margin (if any) relating to such floating rate will be agreed between the Issuer and the relevant Dealer for each series of Floating Rate Notes.
Index Linked Interest Notes	Payments of interest in respect of Index Linked Interest Notes will be calculated by reference to such index and/or formula or to changes in the prices of securities or commodities or to such other factors as the Issuer and the relevant Dealer may agree.

Other provisions in relation to Floating Rate Notes and Index Linked Interest Notes	Floating Rate Notes and Index Linked Interest Notes may also have a maximum interest rate, a minimum interest rate or both. Interest on Floating Rate Notes and Index Linked Interest Notes in respect of each Interest Period, as agreed prior to issue by the Issuer and the relevant Dealer, will be payable on such Interest Payment Dates and will be calculated on the basis of such Day Count Fraction as may be agreed between the Issuer and the relevant Dealer.
Dual Currency Notes	Payments (whether in respect of principal or interest and whether at maturity or otherwise) in respect of Dual Currency Notes will be made in such currencies, and based on such rates of exchange, as the Issuer and the relevant Dealer may agree.
Zero Coupon Notes	Zero Coupon Notes will be offered and sold at a discount to their nominal amount and will not bear interest.
Redemption	The applicable Pricing Supplement will indicate either that the relevant Notes cannot be redeemed prior to their stated maturity (other than in specified installments, if applicable, or for taxation reasons or following an occurrence of a Change of Control (as defined herein) or following an Event of Default) or that such Notes will be redeemable at the option of the Issuer and/or the Noteholders upon giving notice to the Noteholders or the Issuer, as the case may be, on a date or dates specified prior to such stated maturity and at a price or prices and on such other terms as may be set forth in the applicable Pricing Supplement. The applicable Pricing Supplement may provide that Notes may be redeemable in two or more installments of such amounts and on such dates as are indicated in the applicable Pricing Supplement.
Change of Control Redemption	The Notes will be redeemable at the option of the Noteholders, in all or in part, upon the occurrence of a Change of Control at 100% of their nominal amount, together with accrued and unpaid interest, if any, to but excluding the Change of Control Put Date (as defined herein). See "Terms and Conditions of the Notes – Change of Control Redemption."

Denomination of Notes

Notes will be issued in such denominations as may be agreed between the Issuer and the relevant Dealer save that the minimum denomination of each Note will be such as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the relevant Specified Currency.

Unless otherwise stated in the applicable Pricing Supplement, the minimum denomination of each Definitive IAI Registered Note will be US$500,000 or its approximate equivalent in other Specified Currencies.

Notes having a maturity of less than one year may be subject to restrictions on their denomination and distribution (see "– Certain Restrictions"). The minimum denomination of each Note admitted to trading on a regulated market within the European Economic Area or offered to the public in a Member State of the European Economic Area in circumstances which require the publication of a prospectus under the Prospectus Directive will be C50,000 (or, if the Notes are denominated in a currency other than Euro, the equivalent amount in such currency).

Taxation

All payments in respect of the Notes will be made without deduction for or on account of withholding taxes imposed by or on behalf of Korea or any political subdivision or any authority thereof or therein having power to tax, subject as provided in Condition 8 (*Taxation*). In the event that any such deduction is made, the Issuer will, save in certain limited circumstances provided in Condition 8 (*Taxation*), be required to pay additional amounts to cover the amounts so deducted. See "Terms and Conditions of the Notes."

In making an investment decision, each prospective investor is strongly recommended to consult its own professional advisors in respect of the tax implications of holding the Notes. See "Taxation."

Covenants

The terms of the Notes will contain a limitation on liens provision and a limitation upon sale and leaseback provision as further described in Conditions 4.1 (*Covenants – Limitation on Liens*) and 4.2 (*Covenants – Limitation upon Sale and Leaseback Transactions*), respectively.

Cross Acceleration

The terms of the Notes will contain a cross-acceleration provision as further described in Condition 10 (*Events of Default*).

Status of the Notes	The Notes will constitute direct, unconditional, and (subject to Condition 4.1 (*Covenants – Limitation on Liens*)) unsecured obligations of the Issuer which will rank pari passu among themselves and will rank at least pari passu with all other present and future unsecured (subject to Condition 4.1 (*Covenants – Limitation on Liens*)) and unsubordinated obligations of the Issuer, save for such as may be preferred by generally applicable mandatory provisions of applicable law.
Listing	Approval in-principle has been received from the Singapore Stock Exchange in connection with the Program and application will be made for the listing and quotation of Notes that may be issued pursuant to the Program and which are agreed at or prior to the time of issue thereof to be so listed on the Singapore Stock Exchange. The Notes may also be listed on such other or further stock exchange(s) as may be agreed between the Issuer and the relevant Dealer in relation to each Series or Tranche. For so long as any Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, such Notes, if traded on the Singapore Stock Exchange, will be traded in a minimum board lot size of S$200,000 (or its equivalent in foreign currencies). Unlisted Notes may also be issued. The applicable Pricing Supplement will state whether or not the relevant Notes are to be listed and, if so, on which stock exchange(s).
Governing Law	The Notes will be governed by, and construed in accordance with, the laws of the State of New York.
Selling Restrictions	There are restrictions on the offer, sale and transfer of the Notes in the United States, the European Economic Area, the United Kingdom, Italy, Japan, Korea, Singapore, Switzerland, Hong Kong and such other restrictions as may be required in connection with the offering and sale of a particular Tranche of Notes (see "Subscription and Sale and Transfer and Selling Restrictions").

FORM OF THE NOTES

Certain capitalized terms used herein are defined in the "*Terms and Conditions of the Notes*." Any reference herein to Euroclear and/or Clearstream and/or DTC shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system in the applicable Pricing Supplement.

The Notes of each Series will be in either bearer form, with or without interest coupons attached ("Bearer Notes"), or registered form, without interest coupons attached ("Registered Notes"). Bearer Notes will be issued outside the United States in reliance on Regulation S under the Securities Act ("Regulation S") and Registered Notes will be issued both outside the United States in reliance on the exemption from registration provided by Regulation S and within the United States in reliance on Rule 144A or another exemption from the registration requirements of the Securities Act. Bearer Notes will also be subject to U.S. tax restrictions described below.

Bearer Notes

Each Tranche of Bearer Notes will be initially issued in the form of either a temporary bearer global note (a "Temporary Bearer Global Note") or a permanent bearer global note (a "Permanent Bearer Global Note" and, together with Temporary Bearer Global Note, the "Bearer Global Notes") as indicated in the applicable Pricing Supplement, which, in either case, will be delivered on or prior to the original issue date of the Tranche to a common depositary (the "Common Depositary") for Euroclear Bank SA/NV ("Euroclear") and Clearstream Banking SA ("Clearstream"). Bearer Notes issued under the TEFRA D rules will be initially issued in the form of Temporary Bearer Global Note. While any Bearer Note is represented by a Temporary Bearer Global Note, payments of principal, interest (if any) and any other amount payable in respect of the Notes due prior to the Exchange Date (as defined below) will be made against presentation of the Temporary Bearer Global Note only to the extent that certification (in a form annexed to the Agency Agreement) to the effect that the beneficial owners of interests in such Bearer Note are not U.S. persons or persons who have purchased for resale to any U.S. person, as required by U.S. Treasury regulations, has been received by Euroclear and/or Clearstream, as applicable, and Euroclear and/or Clearstream, as applicable, has given a like certification (based on the certifications it has received) to the Principal Paying Agent. Payments of interest in respect of a Temporary Bearer Global Note will be made at the specified office of any Paying Agent outside the United States (which expression, as used herein, means the United States of America, including the States and the District of Columbia, its territories, its possessions and other areas subject to its jurisdiction).

On and after the date (the "Exchange Date") which is 40 days after a Temporary Bearer Global Note is issued, interests in such Temporary Bearer Global Note will be exchangeable (free of charge) upon a request as described therein either for (i) interests in a Permanent Bearer Global Note of the same Series or (ii) for Bearer Notes in definitive form ("Definitive Bearer Notes") of the same Series with, where applicable, receipts, interest coupons and talons attached (as indicated in the applicable Pricing Supplement and subject, in the case of Definitive Bearer Notes, to such notice period as is specified in the applicable Pricing Supplement), in each case against certification of beneficial ownership as described above unless such certification has already been given, provided that purchasers in the United States and certain U.S. persons will not be able to receive Definitive Bearer Notes. The holder of an interest in a Temporary Bearer Global Note will not be entitled to collect any payment of interest, principal or other amount due on or after the Exchange Date unless, upon due certification, exchange of such interest in the Temporary Bearer Global Note for an interest in a Permanent Bearer Global Note or for an interest in Definitive Bearer Notes is improperly withheld or refused.

Payments of principal, interest (if any) or any other amounts on a Permanent Bearer Global Note will be made through Euroclear and/or Clearstream against presentation or surrender (as the case may be) of the Permanent Bearer Global Note without any requirement for certification. Payments of interest in respect of a Permanent Bearer Global Note will be made at the specified office of any Paying Agent outside the United States (which expression, as used herein, means the United States of America, including the States and the District of Columbia, its territories, its possessions and other areas subject to its jurisdiction).

The applicable Pricing Supplement will specify that a Permanent Bearer Global Note will be exchangeable (free of charge), in whole but not in part, for Definitive Bearer Notes with, where applicable, receipts, interest coupons and talons attached upon either (i) not less than 60 days' written notice from Euroclear and/or Clearstream (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) to the Principal Paying Agent as described therein or (ii) only upon the occurrence of an Exchange Event. For these purposes, "Exchange Event" means that (i) an Event of Default (as defined in Condition 10 (*Events of Default*)) has occurred and is continuing, (ii) the Issuer has been notified that both Euroclear and Clearstream have been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and no successor clearing system is available or (iii) the Issuer has or will become subject to adverse tax consequences which would not be suffered were the Notes represented by the Permanent Bearer Global Note in definitive form. The Issuer will promptly give notice to Noteholders in accordance with Condition 14 (*Notices*) if an Exchange Event occurs. In the event of the occurrence of an Exchange Event, Euroclear and/or Clearstream (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) may give notice to the Principal Paying Agent requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iii) above, the Issuer may also give notice to the Principal Paying Agent requesting exchange. Any such exchange shall occur not later than 45 days after the date of receipt of the first relevant notice by the Principal Paying Agent.

The following legend will appear on all Bearer Notes which have an original maturity of more than 365 days and on all talons, receipts and interest coupons relating to such Notes:

"ANY UNITED STATES PERSON WHO HOLDS THIS OBLIGATION WILL BE SUBJECT TO LIMITATIONS UNDER THE UNITED STATES INCOME TAX LAWS, INCLUDING THE LIMITATIONS PROVIDED IN SECTIONS 165(j) AND 1287(a) OF THE INTERNAL REVENUE CODE OF 1986, AS AMENDED."

The sections referred to provide that United States holders, with certain exceptions, will not be entitled to deduct any loss on Bearer Notes, receipts or interest coupons and will not be entitled to capital gains treatment of any gain on any sale, disposition, redemption or payment of principal in respect of such Notes, receipts or interest coupons.

Notes which are represented by a Bearer Global Note will only be transferable in accordance with the rules and procedures for the time being of Euroclear or Clearstream, as the case may be.

Registered Notes

The Registered Notes of each Tranche offered and sold in reliance on Regulation S, which will be sold to non-U.S. persons outside the United States, will initially be represented by a global note in registered form (a "Regulation S Global Note") which will be either (i) deposited with a custodian for, and registered in the name of a nominee of, Depository Trust Company ("DTC") for the accounts of Euroclear and Clearstream or (ii) deposited with a common depositary for, and registered in the name of a common nominee of, Euroclear and Clearstream as specified in the applicable Pricing Supplement. Prior to expiry of the Distribution Compliance Period (as defined in Regulation S) applicable to each Tranche of Notes, beneficial interests in a Regulation S Global Note may not be offered or sold to, or for the account or benefit of, a U.S. person save as otherwise provided in Condition 2 (*Transfers of Registered Notes*) and may not be held otherwise than through Euroclear or Clearstream and such Regulation S Global Note will bear a legend regarding such restrictions on transfer.

The Registered Notes of each Tranche may only be offered and sold in the United States or to U.S. persons in private transactions (i) to "qualified institutional buyers" within the meaning of Rule 144A under the Securities Act ("QIBs") or (ii) to "accredited investors" as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act that are institutions ("Institutional Accredited Investors") who agree to purchase the Notes for their own account and not with a view to the distribution thereof. The Registered Notes of each Tranche sold to QIBs will be represented by a global note in registered form (a "Rule 144A Global Note" and, together with a Regulation S Global Note, the "Registered Global Notes") which will be deposited with a custodian for, and registered in the name of a nominee of, DTC.

Persons holding beneficial interests in Registered Global Notes will be entitled or required, as the case may be, under the circumstances described below, to receive physical delivery of definitive Notes in fully registered form. Unless otherwise stated in the applicable Pricing Supplement, the minimum denomination of each Global Note shall be C100,000 or its approximate equivalent in other Specified Currencies.

The Registered Notes of each Tranche sold to Institutional Accredited Investors will be in definitive form, registered in the name of the holder thereof ("Definitive IAI Registered Notes"). Unless otherwise set forth in the applicable Pricing Supplement, Definitive IAI Registered Notes will be issued only in minimum denominations of US$500,000 and integral multiples of US$1,000 in excess thereof (or the approximate equivalents in the applicable Specified Currency). Definitive IAI Registered Notes will be subject to the restrictions on transfer set forth therein and will bear the restrictive legend described under "Subscription and Sale and Transfer and Selling Restrictions." Institutional Accredited Investors that hold Definitive IAI Registered Notes may elect to hold such Notes through DTC, but transferees acquiring the Notes in transactions exempt from Securities Act registration pursuant to Regulation S or Rule 144 under the Securities Act (if available) may do so upon satisfaction of the requirements applicable to such transfer as described under "Subscription and Sale and Transfer and Selling Restrictions." The Rule 144A Global Note and the Definitive IAI Registered Notes will be subject to certain restrictions on transfer set forth therein and will bear a legend regarding such restrictions.

Payments of principal, interest and any other amount in respect of the Registered Global Notes will, in the absence of provision to the contrary, be made to the person shown on the Register (as defined in Condition 6.4 (*Payments – Payments in respect of Registered Notes*) as the registered holder of the Registered Global Notes. None of the Issuer, any Paying Agent or the Registrar will have any responsibility or liability for any aspect of the records relating to or payments or deliveries made on account of beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

Payments of principal, interest or any other amount in respect of the Registered Notes in definitive form will, in the absence of provision to the contrary, be made to the persons shown on the Register on the relevant Record Date (as defined in Condition 6.4 (*Payments – Payments in respect of Registered Notes*)) immediately preceding the due date for payment in the manner provided in that Condition.

Interests in a Registered Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Registered Notes without receipts, interest coupons or talons attached only upon the occurrence of an Exchange Event. For these purposes, "Exchange Event" means that (i) an Event of Default has occurred and is continuing, (ii) in the case of Notes registered in the name of a nominee for DTC, DTC has notified the Issuer that it is unwilling or unable to continue to act as depository for the Notes and no successor or alternative clearing system is available or DTC has ceased to constitute a clearing agency registered under the Exchange Act, (iii) in the case of Notes registered in the name of a nominee for a common depositary for Euroclear and Clearstream, the Issuer has been notified that both Euroclear and Clearstream have been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and, in any such case, no successor clearing system is available or (iv) the Issuer has or will become subject to adverse tax consequences which would not be suffered were the Notes represented by the Registered Global Note in definitive form. For so long as the Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, in the event that the Registered Global Note is exchanged for definitive Registered Notes, the Issuer will appoint and maintain a paying agent in Singapore, where the definitive Registered Notes may be presented or surrendered for payment or redemption. In addition, in the event that the Registered Global Note is exchanged for definitive Registered Notes, an announcement of such exchange will be made by or on behalf of the Issuer through the Singapore Stock Exchange and such announcement will include all material information with respect to the delivery of the definitive Registered Notes, including details of the Paying Agent in Singapore. The Issuer will promptly give notice to Noteholders in accordance with Condition 14 (*Notices*) if an Exchange Event occurs. In the event of the occurrence of an Exchange Event, DTC, Euroclear and/or Clearstream (acting on the instructions of any holder of an interest in such Registered Global Note) may give notice to the Registrar requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iv) above, the Issuer may also give notice to the Registrar requesting exchange. Any such exchange shall occur not later than 10 days after the date of receipt of the first relevant notice by the Registrar.

Transfer of Interests

Interests in a Registered Global Note may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such interest in another form of Registered Global Note or in the form of a Definitive IAI Registered Note and Definitive IAI Registered Notes may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such Notes in the form of an interest in a Registered Global Note. No beneficial owner of an interest in a Registered Global Note will be able to transfer such interest, except in accordance with the applicable procedures of DTC, Euroclear and Clearstream, in each case to the extent applicable. Registered Notes are also subject to the restrictions on transfer set forth therein and will bear a legend regarding such restrictions. See "Subscription and Sale and Transfer and Selling Restrictions."

General

Pursuant to the Agency Agreement (as defined under "Terms and Conditions of the Notes"), the Principal Paying Agent or the Registrar, as the case may be, shall arrange that, where a further Tranche of Notes is issued which is intended to form a single Series with an existing Tranche of Notes, the Notes of such further Tranche shall be assigned a common code and ISIN and, where applicable, a CUSIP and CINS number which are different from the common code, ISIN, CUSIP and CINS assigned to Notes of any other Tranche of the same Series until at least the expiry of the distribution compliance period applicable to the Notes of such Tranche and, for Bearer Notes subject to the certification requirements under U.S. Treasury regulations, until at least the Notes represented by interests in a temporary Global Note are exchanged for Notes represented by an interest in a permanent Global Note or for Definitive Bearer Notes.

For so long as any of the Notes is represented by a Global Note held on behalf of Euroclear and/or Clearstream each person (other than Euroclear or Clearstream) who is for the time being shown in the records of Euroclear or of Clearstream as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear or Clearstream as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes save in the case of manifest error) shall be treated by the Issuer and its agents as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on such nominal amount of such Notes, for which purpose the bearer of the relevant Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer and its agents as the holder of such nominal amount of such Notes in accordance with and subject to the terms of the relevant Global Note and the expressions "Noteholder" and "holder of Notes" and related expressions shall be construed accordingly.

So long as DTC or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and such Notes except to the extent that in accordance with DTC's published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Any reference herein to Euroclear and/or Clearstream and/or DTC shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system specified in the applicable Pricing Supplement.

A Note may be accelerated by the holder thereof in certain circumstances described in Condition 10 (*Events of Default*). In such circumstances, where any Note is still represented by a Global Note and the Global Note (or any part thereof) has become due and repayable in accordance with the Terms and Conditions of such Notes and payment in full of the amount due has not been made in accordance with the provisions of the Global Note then holders of interest in such Global Note credited to their accounts with Euroclear and/or Clearstream and/or DTC, as the case may be, will become entitled to proceed directly against the Issuer on the basis of statements of account provided by Euroclear, Clearstream and/or DTC, as the case may be. In addition, holders of interests in such Global Note credited to their accounts with DTC may require DTC to deliver Definitive Notes in registered form in exchange for their interest in such Global Note in accordance with DTC's standard operating procedures.

For so long as the Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, in the event that the Global Note is exchanged for Definitive Notes, the Issuer will appoint and maintain a Paying Agent in Singapore, where such Definitive Notes may be presented or surrendered for payment or redemption. In addition, in the event that the Global Note is exchanged for Definitive Notes, an announcement of such exchange will be made by or on behalf of the Issuer through the Singapore Stock Exchange and such announcement will include all material information with respect to the delivery of the Definitive Notes, including details of the Paying Agent in Singapore.

Form of Applicable Pricing Supplement

Set out below is the form of Pricing Supplement which will be completed for each Tranche of Notes issued under the Program.

[MIFID II PRODUCT GOVERNANCE – Solely for the purposes of [the/each] manufacturer's product approval process, the target market assessment in respect of the Notes has led to the conclusion that: (i) the target market for the Notes is eligible counterparties and professional clients only, each as defined in Directive 2014/65/EU (as amended, "MiFID II"); and (ii) all channels for distribution of the Notes to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a "distributor") should take into consideration the manufacturer['s/s'] target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturer['s/s'] target market assessment) and determining the appropriate distribution channels.]

[UK MiFIR PRODUCT GOVERNANCE – Solely for the purposes of [the/each] manufacturer's product approval process, the target market assessment in respect of the Notes has led to the conclusion that: (i) the target market for the Notes is only eligible counterparties, as defined in the FCA Handbook Conduct of Business Sourcebook, and professional clients, as defined in the European Union (Withdrawal) Act 2018; and (ii) all channels for distribution of the Notes to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a "distributor") should take into consideration the manufacturer['s/s'] target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturer['s/s'] target market assessment) and determining the appropriate distribution channels.]

[PROHIBITION OF SALES TO EEA RETAIL INVESTORS – Any Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("EEA"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "MiFID II"); (ii) a customer within the meaning of Directive (EU) 2016/97 (the "Insurance Distribution Directive"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (the "Prospectus Regulation"). Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the "PRIIPs Regulation") for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPS Regulation.][1]

1 Legend to be included on front of the pricing supplement if the Notes potentially constitute "packaged" products or the issuer wishes to prohibit offers to EEA retail investors for any other reason, in which case the selling restriction should be specified to be "Applicable".

[UK PRIIPs REGULATION – PROHIBITION OF SALES TO UK RETAIL INVESTORS – The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor United Kingdom ("UK"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 ("EUWA"); (ii) a customer within the meaning of the provisions of the FSMA and any rules or regulations made under the Financial Services and Markets Act 2000 ("FSMA") to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or (iii) not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA. Consequently no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law by virtue of the EUWA (the "UK PRIIPs Regulation") for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.]

[**NOTIFICATION UNDER SECTION 309B(1)(C) OF THE SECURITIES AND FUTURES ACT 2001 OF SINGAPORE (THE "SFA")** – the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA) that the Notes are [prescribed capital markets products [OR] capital markets products other than prescribed capital markets products] (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and [Excluded Investment Products [OR] Specified Investment Products] (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).]

[Date]

KOREA EXPRESSWAY CORPORATION

Issue of [Aggregate Nominal Amount of Tranche] [Title of Notes]
under the US$3,500,000,000
Global Medium Term Note Program

This document constitutes the Pricing Supplement relating to the issue of Notes described herein. Terms used herein shall be deemed to be defined as such for the purposes of the terms and conditions (the "Conditions") set forth in the Offering Memorandum dated [●], 2022 (the "Offering Memorandum"). This Pricing Supplement is supplemental to and must be read in conjunction with such Offering Memorandum.

[*The following alternative language applies if the first tranche of an issue which is being increased was issued under an Offering Memorandum with an earlier date.*

Terms used herein shall be deemed to be defined as such for the purposes of the terms and conditions (the "Conditions") set forth in the Offering Memorandum dated [original date]. The Pricing Supplement contains the final terms of the Notes and must be read in conjunction with the Offering Memorandum dated [current date], save in respect of the Conditions which are extracted from the Offering Memorandum dated [original date] and are attached hereto.]

[Include whichever of the following apply or specify as "Not Applicable" (N/A). Note that the numbering should remain as set out below, even if "Not Applicable" is indicated for individual paragraphs or sub-paragraphs. Italics denote directions for completing the Pricing Supplement.]

[If the Notes have a maturity of less than one year from the date of their issue, the minimum denomination may need to be £100,000 or its equivalent in any other currency.]

1	Issuer:	Korea Expressway Corporation
2	(i) Series Number:	
	(ii) Tranche Number:	
		(If re-opening fungible with an existing Series, details of that Series, including the date on which the Notes become fungible)
	(iii) Re-opening:	[Yes/No] [*Specify terms of initial or eventual fungibility*]
3	Specified Currency or Currencies:	
4	Aggregate Nominal Amount:	
	(i) Series:	
	(ii) Tranche:	
5	(a) Issue Price:	% of the Aggregate Nominal Amount [plus accrued interest from [insert date] (*in the case of fungible issues only, if applicable*)]

(b) Net proceeds: (*Required only for listed issues*)

(c) Use of proceeds: (*as described in the offering memorandum/describe*)

6 (i) Specified Denominations: (*N.B. In the case of Registered Notes, this means the minimum integral amount in which transfers can be made. For Registered Global Notes, consider including language substantially to the following effect (however, appropriate amendments should be made for different currencies*)

"[€100,000] and integral multiples of [C1,000] in excess thereof")
(*N.B. In the case of Bearer Notes with a Specified Denomination and higher integral multiples above the minimum denomination, consider including language substantially to the following effect (however, appropriate amendments should be made for different currencies): "[U.S.$200,000] and integral multiples of [U.S.$1,000] in excess thereof, up to and including [U.S.$499,000] and, for so long as the Notes are represented by a Global Note (as defined below) and Euroclear and Clearstream so permit, the Notes shall be tradable only in the minimum authorized denomination of [U.S. $200,000] and higher integral multiples of [U.S.$1,000], notwithstanding that no definitive notes will be issued with a denomination above [U.S.$499, 000]."*)

(ii) Calculation Amount:

(*If there is only one Specified Denomination, insert the Specified Denomination. If there are more than one Specified Denomination, insert the highest common factor. Note: There must be a common factor in the case of two or more Specified Denominations.*)

7 (i) Issue Date:

(ii) Interest Commencement Date: [*specify/Issue Date/Not Applicable*] (*N.B. An Interest Commencement Date will not be relevant for certain Notes, for example Zero Coupon Notes.*)

8	Maturity Date:	[*Fixed rate – specify date/Floating rate* – Interest Payment Date falling in or nearest to [specify month and year]][2]
9	Interest Basis:	[% Fixed Rate] [[EURIBOR/HIBOR/SOFR Benchmark] +/- % Floating Rate] [Zero Coupon] [Index Linked Interest] [Dual Currency Interest] [*specify other*] (further particulars specified below)
10	Redemption/Payment Basis:	[Redemption at par] [Dual Currency Redemption] [Partly Paid] [Installment] [*specify other*]
11	Change of Interest Basis or Redemption/Payment Basis:	[*Specify details of any provision for change of Notes into another Interest Basis or Redemption/Payment Basis*]
12	Put/Call Options:	[Investor Put] [Issuer Call] [(further particulars specified below)]
13	Listing:	[Singapore Exchange Securities Trading Limited/*specify other*/None]
14	Method of distribution:	[Syndicated/Non-syndicated]

Provisions Relating To Interest (If Any) Payable

15	Fixed Rate Note Provisions	[Applicable/Not Applicable] (*If not applicable, delete the remainder of this paragraph*)
	(i) Rate(s) of Interest:	% per annum [payable annually/semi-annually/quarterly/other (*specify*) in arrear] (*If payable other than annually, consider amending Condition 5 (Interest)*)
	(ii) Interest Payment Date(s):	[in each year up to and including the Maturity Date]/[*specify other*][3](*NB: This will need to be amended in the case of long or short coupons*)

2 Note that for Hong Kong dollar denominated Fixed Rate Notes where the Interest Payment Dates are subject to modification it will be necessary to use the Floating Rate wording here.

3 Note that for certain Hong Kong dollar denominated Fixed Rate Notes, the Interest Payment Dates are subject to modification and the following words should be added: "provided that if any Interest Payment Date falls on a day which is not a Business Day, the Interest Payment Date will be the next succeeding Business Day unless it would thereby fall in the next calendar month in which event the Interest Payment Date shall be brought forward to the immediately preceding Business Day. For these purposes, "Business Day" means a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and currency deposits) in Hong Kong and ."

(iii)	Fixed Coupon Amount(s): (*Applicable to Notes in definitive form*)	per Calculation Amount[4]
(iv)	Broken Amount(s): (*Applicable to Notes in definitive form*)	per Calculation Amount, payable on the Interest Payment Date falling [in/on] [*Insert particulars of any initial or final broken interest amounts which do not correspond with the Fixed Coupon Amount*]
(v)	Day Count Fraction:	[Actual/Actual (ICMA) or 30/360 or *specify other*]
(vi)	Determination Date[s]:	in each year [*Insert regular interest payment dates, ignoring issue date or maturity date in the case of a long or short first or last coupon* (*NB: This will need to be amended in the case of regular interest payment dates which are not of equal duration*.) (*NB: Only relevant where Day Count Fraction is Actual/Actual (ICMA)*)]
(vii)	Other terms relating to the method of calculating interest for Fixed Rate Notes:	[None/*Give details*]

16	Floating Rate Note Provisions	[Applicable/Not Applicable] (*If not applicable, delete the remainder of this paragraph*)
(i)	Specified Period(s)/Specified Interest Payment Dates:	
(ii)	Business Day Convention:	[Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/Preceding Business Day Convention/[*specify other*]]
(iii)	Additional Business Center(s):	(*Insert the City of New York for U.S. dollar denominated Notes to be held through DTC and for non-U.S. dollar denominated Notes where exchange into U.S. dollars is contemplated for DTC participants holding through Euroclear and Clearstream*)

4 For Hong Kong dollar denominated Fixed Rate Notes where the Interest Payment Dates are subject to modification the following wording is appropriate: "Each Fixed Coupon Amount shall be calculated by applying the Rate of Interest to each Specified Denomination, multiplying such sum by the actual number of days in the Accrual Period (as defined in Condition 5.1(a)) divided by 365 and rounding the resultant figure to the nearest HK$0.01, HK$0.005 being rounded upwards."

(iv) Manner in which the Rate of Interest and Interest Amount are to be determined:	[Screen Rate Determination/ISDA Determination/*specify other*]
(v) Party responsible for calculating the Rate of Interest and Interest Amount (if not the Agent):	
(vi) Screen Rate Determination:	
• Reference Rate:	month [EURIBOR/HIBOR/SOFR Benchmark/specify other] (*Either EURIBOR, HIBOR, SOFR Benchmark or other, although additional information is required if other – including fallback provisions in the Agency Agreement*)
• Interest Determination Date(s):	(*First day of each Interest Period if Sterling or Hong Kong dollar HIBOR and the second day on which the TARGET2 System is open prior to the start of each Interest Period if EURIBOR*)
• Relevant Screen Page:	(*In the case of EURIBOR, if not Reuters Page EURIBOR01 ensure it is a page which shows a composite rate or amend the fallback provisions appropriately*)
• SOFR Benchmark:	[Not Applicable/Compounded Daily SOFR/SOFR Index] *(Only applicable where the Reference Rate is SOFR)*
• Compounded Daily SOFR:	[Not Applicable/SOFR Lag/SOFR Observation Shift] *(Only applicable in the case of Compounded Daily SOFR)*
• Lookback Days:	[Not Applicable/[ ] U.S. Government Securities Business Day(s)] *(Only applicable in the case of SOFR Lag)*
• SOFR Observation Shift Days:	[Not Applicable/[ ] U.S. Government Securities Business Day(s)] *(Only applicable in the case of SOFR Observation Shift or SOFR Index)*
• SOFR $Index_{Start}$:	[Not Applicable/[ ] U.S. Government Securities Business Day(s)] *(Only applicable in the case of SOFR Index)*
• SOFR $Index_{End}$:	[Not Applicable/[ ] U.S. Government Securities Business Day(s)] *(Only applicable in the case of SOFR Index)*

(vii)	ISDA Determination:	
	• Floating Rate Option:	(*if not on the same basis as the floating rate under a notional interest rate swap transaction in the relevant Specified Currency governed by an agreement incorporating the 2006 ISDA Definitions, the Issuer shall describe the basis here*)
	• Designated Maturity:	
	• Reset Date:	
(viii)	Margin(s):	[+/-] % per annum
(ix)	Minimum Rate of Interest:	% per annum
(x)	Maximum Rate of Interest:	% per annum
(xi)	Day Count Fraction:	[Actual/Actual (ISDA) Actual/365 (Fixed) Actual/365 (Sterling) Actual/360 30/360, 360/360 or Bond Basis 30E/360 or Eurobond Basis 30E/360 (ISDA) *Other*] (*See Condition 5 (Interest) for alternatives*)
(xii)	Fall back provisions, rounding provisions and any other terms relating to the method of calculating interest on Floating Rate Notes, if different from those set out in the Conditions:	
(xiii)	Benchmark Replacement (General)	[Applicable/Not Applicable]
(xiv)	Benchmark Replacement (SOFR)	[Applicable/Not Applicable]

17	Zero Coupon Note Provisions	[Applicable/Not Applicable] (*If not applicable, delete the remainder of this paragraph*)
	(i) Accrual Yield:	% per annum
	(ii) Reference Price:	
	(iii) Any other formula/basis of determining amount payable:	

	(iv)	Day Count Fraction in relation to Early Redemption Amounts and late payment:	[Conditions 7.7(c) (*Redemption and Purchase – Early Redemption Amounts*) and 7.12 (*Redemption and Purchase – Late payment on Zero Coupon Notes*) apply/*specify other*] (*Consider applicable day count fraction if not U.S. dollar denominated*)
18		Index Linked Interest Note Provisions	[Applicable/Not Applicable] (*If not applicable, delete the remainder of this paragraph*)
	(i)	Index/Formula:	[*give or annex details*]
	(ii)	Calculation Agent:	[*give name*]
	(iii)	Party responsible for calculating the Rate of Interest (if not the Calculation Agent) and Interest Amount (if not the Principal Paying Agent):	
	(iv)	Provisions for determining Coupon where calculation by reference to Index and/or Formula is impossible or impracticable:	[*need to include a description of market disruption or settlement disruption events and adjustment provisions*]
	(v)	Specified Period(s)/Specified Interest Payment Dates:	
	(vi)	Business Day Convention:	[Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/Preceding Business Day Convention/*specify other*]
	(vii)	Additional Business Center(s):	
	(viii)	Minimum Rate of Interest:	% per annum
	(ix)	Maximum Rate of Interest:	% per annum
	(x)	Day Count Fraction:	[Actual/Actual (ISDA) Actual/365 (Fixed) Actual/365 (Sterling) Actual/360 30/360, 360/360 or Bond Basis 30E/360 or Eurobond Basis 30E/360 (ISDA) *Other*] (*See Condition 5 (Interest) for alternatives*)

19	Dual Currency Note Provisions	[Applicable/Not Applicable] (*If not applicable, delete the remainder of this paragraph*)
	(i) Rate of Exchange/method of calculating Rate of Exchange:	[*give or annex details*]
	(ii) Party, if any, responsible for calculating the principal and/or interest due (if not the Principal Paying Agent):	
	(iii) Provisions applicable where calculation by reference to Rate of Exchange impossible or impracticable:	[*need to include a description of market disruption or settlement disruption events and adjustment provisions*]
	(iv) Person at whose option Specified Currency(ies) is/are payable:	

PROVISIONS RELATING TO REDEMPTION

20	Issuer Call	
	(i) Optional Redemption Date(s):	
	(ii) Optional Redemption Amount and method, if any, of calculation of such amount(s):	[per Calculation Amount/*specify other*/see Appendix]
	(iii) If redeemable in part:	
	(a) Minimum Redemption Amount:	
	(b) Maximum Redemption Amount:	
	(iv) Notice period (if other than as set out in the Conditions):	
		(*N.B. If setting notice periods which are different to those provided in the Conditions, the Issuer is advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer and the Principal Paying Agent*)

21	Investor Put	[Applicable/Not Applicable] (*If not applicable, delete the remainder of this paragraph*)
	(i) Optional Redemption Date(s):	
	(ii) Optional Redemption Amount of each Note and method, if any, of calculation of such amount(s):	[per Calculation Amount/*specify other*/see Appendix]
	(iii) Notice period (if other than as set out in the Conditions):	(*N.B. If setting notice periods which are different to those provided in the Conditions, the Issuer is advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer and the Principal Paying Agent*)
22	Final Redemption Amount of each Note:	[per Calculation Amount/*specify other*/see Appendix]
23	Early Redemption Amount of each Note payable on redemption for taxation reasons or on event of default and/or the method of calculating the same (if required or if different from that set out in Condition 7.7 (*Redemption and Purchase – Early Redemption Amounts*):	[per Calculation Amount/*specify other*/see Appendix]

General Provisions Applicable to the Notes

24	Form of Notes:	[Bearer Notes: [Temporary Bearer Global Note exchangeable for a Permanent Bearer Global Note which is exchangeable for Definitive Notes [on 60 days' notice given at any time/only upon an Exchange Event[5]]] [Temporary Bearer Global Note exchangeable for Definitive Notes on and after the Exchange Date] [Permanent Bearer Global Note exchangeable for Definitive Notes [on 60 days' notice given at any time/only upon an Exchange Event]][6] [Registered Notes: [Regulation S Global Note (US$ nominal amount) registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream]] [Rule 144A Global Note (US$ nominal amount) registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream]] [Definitive IAI Registered Notes (specify nominal amounts)]]
25	Additional Financial Center(s) or other special provisions relating to Payment Days:	[Not Applicable/*give details*] (*Note that this item relates to the place of payment and not Interest Period end dates to which items 16(iii) and 18(vii) relate; insert the City of New York for U.S. dollar denominated Notes to be held through DTC*)
26	Talons for future Coupons or Receipts to be attached to Definitive Bearer Notes (and dates on which such Talons mature):	[Not Applicable/*give details*]
27	Details relating to Partly Paid Notes: amount of each payment comprising the Issue Price and date on which each payment is to be made and consequences of failure to pay, including any right of the Issuer to forfeit the Notes and interest due on late payment:	[Not Applicable/*give details*] (*NB: new forms of Temporary Global Note and/or Permanent Global Note may be required for Partly Paid issues*)

5 Care should be taken to ensure that circumstances in which a Temporary Bearer Global Note or Permanent Bearer Global Note is exchangeable for Definitive Notes are in compliance with requirements of the relevant clearing system.

Ensure that this is consistent with the wording in the "Form of the Notes" section in the Offering Memorandum and the Notes themselves. N.B. The exchange upon notice/at any time options should not be expressed to be applicable if the Specified Denomination of the Notes in paragraph 6 includes language substantially to the following effect: "[US$200,000] and integral multiples of [US$1,000] in excess thereof up to and including [US$499,000]." Furthermore, such Specified Denomination construction is not permitted in relation to any issue of Notes which is to be represented on issue by a Temporary Global Note exchangeable for Definitive Notes.

6 May not be used if TEFRA D rules apply.

28	Details relating to Installment Notes:	
	(i) Installment Amount(s):	[Not Applicable/*give details*]
	(ii) Installment Date(s):	[Not Applicable/*give details*]
29	Redenomination applicable:	Redenomination [not] applicable [(*If Redenomination is applicable, specify the applicable Day Count Fraction and any provisions necessary to deal with floating rate interest calculation (including alternative reference rates)*)]
30	(i) The rate of interest to be applied for purposes of determining the Attributable Debt as defined in Condition 4.3 (*Covenants – Interpretation*):	
	(ii) Other terms or special conditions:	[Not Applicable/*give details*]

Distribution

31	(i) If syndicated, names of Managers:	[Not Applicable/*give names*]
	(ii) Stabilizing Manager(s) (if any):	[Not Applicable/*give name(s)*]
32	If non-syndicated, name of relevant Dealer:	[Not Applicable/*give name*]
33	Whether TEFRA D or TEFRA C rules applicable or TEFRA rules not applicable:	[TEFRA D/TEFRA C/TEFRA not applicable (for Bearer Notes with a maturity of one year or less (including unilateral rollovers and extensions) or Registered Notes)][7]
34	Prohibition of Sales to EEA Retail Investors:	[Applicable/Not Applicable] *(If the Notes clearly do not constitute "packaged" products or the Notes do constitute "packaged" products and a key information document will be prepared, "Not Applicable" should be specified. If the Notes may constitute "packaged" products and no key information document will be prepared, "Applicable" should be specified.)*
35	Prohibition of Sales to UK Retail Investors:	[Applicable/Not Applicable] *(If the Notes clearly do not constitute "packaged" products or the Notes do constitute "packaged" products and a key information document will be prepared, "Not Applicable" should be specified. If the Notes may constitute "packaged" products and no key information document will be prepared, "Applicable" should be specified.)*
36	Additional selling restrictions:	[Not Applicable/*give details*]

7 Where TEFRA D rules are applicable, a Note must be issued in the form of a Temporary Bearer Global Note exchangeable upon U.S. tax certification for a Permanent Bearer Global Note or for Definitive Notes.

Operational Information

37	Any clearing system(s) other than Euroclear and Clearstream and the relevant identification number(s):	[Not Applicable/*give name(s) and number(s)*]
38	Delivery:	Delivery [against/free of] payment
39	[In the case of Registered Notes, specify the location of the office of the Registrar if other than Frankfurt:]	[Not Applicable/*specify*]
40	Additional Paying Agent(s) (if any):	
	ISIN: Common Code: CUSIP:	

(*insert here any other relevant codes such as a CMU instrument number or CINS code*)

Listing Application

This Pricing Supplement comprises the details required to list the issue of Notes described herein pursuant to the US$3,500,000,000 Global Medium Term Note Program of Korea Expressway Corporation.

[The Singapore Exchange Securities Trading Limited (the "Singapore Stock Exchange") assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained herein. Approval in-principle from, admission to the Official List of, and listing and quotation of the Notes on, the Singapore Stock Exchange are not to be taken as an indication of the merits of the Issuer, the Program or the Notes.]

Responsibility

The Issuer accepts responsibility for the information contained in this Pricing Supplement. Signed on behalf of the Issuer:

By: ________________________________

Duly authorized signatory

If the applicable Pricing Supplement specifies any modification to the Terms and Conditions of the Notes as described herein, it is envisaged that, to the extent that such modification relates only to Conditions 1 (*Form, Denomination and Title*), 5 (*Interest*), 6 (*Payments*), 7 (*Redemption and Purchase*) (except Condition 7.2 (*Redemption and Purchase – Redemption for Tax Reasons*)), 11 (*Replacement of Notes, Receipts, Coupons and Talons*), 12 (*Principal Paying Agent, Registrar, Exchange Agent, Paying and Transfer Agents*), 13 (*Exchange of Talons*), 14 (*Notices*) (insofar as Notes are not listed or admitted to trading on any stock exchange) or 16 (*Further Issues*), they will not necessitate the preparation of a supplement to this Offering Memorandum. If the Terms and Conditions of the Notes of any Series are to be modified in any other respect, a supplement to this Offering Memorandum will be prepared, if appropriate.

TERMS AND CONDITIONS OF THE NOTES

The following are the Terms and Conditions of the Notes which will be incorporated by reference into each Global Note (as defined below) and each definitive Note, in the latter case only if permitted by the rules of the relevant stock exchange (if any) and agreed by the Issuer and the relevant Dealer at the time of issue but, if not so permitted and agreed, such definitive Note will have endorsed thereon or attached thereto such Terms and Conditions. The applicable Pricing Supplement in relation to any Tranche of Notes may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with the following Terms and Conditions, replace or modify the following Terms and Conditions for the purpose of such Notes. The applicable Pricing Supplement (or the relevant provisions thereof) will be endorsed upon, or attached to, each Global Note and definitive Note. Reference should be made to "Form of the Notes" above for a description of the content of Pricing Supplements which will include the definitions of certain terms used in the following Conditions or specify which of such terms are to apply in relation to the relevant Notes. Reference herein to "Condition" shall be to the Terms and Conditions set forth below.

This Note is one of a Series (as defined below) of Notes issued by Korea Expressway Corporation (formerly Korea Highway Corporation, the "Issuer") pursuant to the Agency Agreement (as defined below).

References herein to the "Notes" shall be references to the Notes of this Series and shall mean:

(a) in relation to any Notes represented by a global Note (a "Global Note"), units of the lowest Specified Denomination in the Specified Currency;

(b) any definitive Notes in bearer form ("Bearer Notes") issued in exchange for a Global Note in bearer form;

(c) any Global Note; and

(d) any definitive Notes in registered form ("Registered Notes") (whether or not issued in exchange for a Global Note in registered form).

The Notes, the Receipts (as defined below) and the Coupons (as defined below) have the benefit of the Amended and Restated Agency Agreement (such Agreement as modified and/or supplemented and/or restated from time to time, the "Agency Agreement") dated October 12, 2012 and made between the Issuer, Citibank, N.A., London Branch, as principal paying agent (the "Principal Paying Agent," which expression shall include any successor principal paying agent, and, together with any additional paying agents appointed in accordance with the Agency Agreement, the "Paying Agents," which expression shall, unless the context otherwise requires, include any successor paying agents), as transfer agent (the "Transfer Agent," which expression shall include any successor to any of Citibank, N.A., London Branch in its capacity as such and any substitute or any additional transfer agents appointed in accordance with the Agency Agreement), and as exchange agent (the "Exchange Agent," which expression shall include any successor to Citibank, N.A., London Branch in its capacity as such and any substitute or any additional exchange agent appointed in accordance with the Agency Agreement), and Citigroup Global Markets Europe AG as registrar (the "Registrar," which expression shall include any successor registrar).

Interest bearing Bearer Notes in definitive form ("Definitive Bearer Notes") have interest coupons ("Coupons") and, if indicated in the applicable Pricing Supplement, talons for further Coupons ("Talons") attached on issue. Any reference herein to Coupons or coupons shall, unless the context otherwise requires, be deemed to include a reference to Talons or talons. Definitive Bearer Notes repayable in installments have receipts ("Receipts") for the payment of the installments of principal (other than the final installment) attached on issue. Registered Notes and Global Notes do not have Receipts, Coupons or Talons attached on issue.

The Pricing Supplement for this Note (or the relevant provisions thereof) is attached to or endorsed on this Note and supplements these Conditions and may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Conditions, replace or modify these Conditions for the purposes of this Note. References to the "applicable Pricing Supplement" are to the Pricing Supplement (or the relevant provisions thereof) attached to or endorsed on this Note.

Any reference to "Noteholders" or "holders" in relation to any Notes shall mean (in the case of Bearer Notes) the holders of the Notes and (in the case of Registered Notes) the persons in whose name the Notes are registered and shall, in relation to any Notes represented by a Global Note, be construed as provided below. Any reference herein to "Receiptholders" shall mean the holders of the Receipts and any reference herein to "Couponholders" shall mean the holders of the Coupons, and shall, unless the context otherwise requires, include the holders of the Talons.

As used herein, "Tranche" means Notes which are identical in all respects (including as to listing and admission to trading) and "Series" means a Tranche of Notes together with any further Tranche or Tranches of Notes which are (i) expressed to be consolidated and form a single series and (ii) identical in all respects (including as to listing and admission to trading) except for their respective Issue Dates, Interest Commencement Dates (if applicable) and/or Issue Prices (if applicable).

Copies of the Agency Agreement and the Pricing Supplement applicable to this Note are available for inspection and collection, free of charge, during normal business hours at the specified office of each of the Paying Agents, the Registrar and the Transfer Agents (such Agents and the Registrar being together referred to as the "Agents") save that, if this Note is an unlisted Note of any Series, the applicable Pricing Supplement will only be available for inspection by a Noteholder holding one or more unlisted Notes of that Series and such Noteholder must produce evidence satisfactory to the relevant Agent as to its holding of such Notes and identity. The Noteholders, the Receiptholders and the Couponholders are deemed to have notice of, and are entitled to the benefit of and are bound by, all the provisions of the Agency Agreement and the applicable Pricing Supplement which are applicable to them. The statements in these Conditions include summaries of, and are subject to, the detailed provisions of the Agency Agreement.

Words and expressions defined in the Agency Agreement or used in the applicable Pricing Supplement shall have the same meanings where used in these Conditions unless the context otherwise requires or unless otherwise stated and provided that, in the event of inconsistency between the Agency Agreement and the applicable Pricing Supplement, the applicable Pricing Supplement will prevail.

1 Form, Denomination and Title

The Notes may be in bearer form or in registered form as specified in the applicable Pricing Supplement and, in the case of definitive Notes, will be serially numbered, in the Specified Currency and the Specified Denomination(s). Except as provided in Condition 2 (*Transfers of Registered Notes*), Notes of one Specified Denomination may not be exchanged for Notes of another Specified Denomination and Bearer Notes may not be exchanged for Registered Notes and vice versa.

This Note may be a Fixed Rate Note, a Floating Rate Note, a Zero Coupon Note, an Index Linked Interest Note, a Dual Currency Interest Note or a combination of any of the foregoing, depending upon the Interest Basis shown in the applicable Pricing Supplement.

This Note may be an Installment Note, a Dual Currency Redemption Note, a Partly Paid Note or a combination of any of the foregoing, depending upon the Redemption/Payment Basis shown in the applicable Pricing Supplement.

Definitive Bearer Notes are issued with Coupons and (if applicable) Receipts and Talons attached, unless they are Zero Coupon Notes in which case references to Coupons and Couponholders in these Conditions are not applicable.

Subject as set out below, title to the Bearer Notes, Receipts and Coupons will pass by delivery and title to the Registered Notes will pass upon registration of transfers in accordance with the provisions of the Agency Agreement. The Issuer and any Agent will (except as otherwise required by law) deem and treat the bearer of any Bearer Note, Receipt or Coupon and the registered holder of any Registered Note as the absolute owner thereof (whether or not overdue and notwithstanding any notice of ownership or writing thereon or notice of any previous loss or theft thereof) for all purposes but, in the case of any Global Note, without prejudice to the provisions set out in the next succeeding paragraph.

For so long as any of the Notes is represented by a Global Note held on behalf of Euroclear Bank S.A./N.V. ("Euroclear") and/or Clearstream Banking, S.A. ("Clearstream"), each person (other than Euroclear or Clearstream) who is for the time being shown in the records of Euroclear or of Clearstream as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear or Clearstream as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes save in the case of manifest error) shall be treated by the Issuer and the Agents as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on such nominal amount of such Notes, for which purpose the bearer of the relevant Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer and any Agent as the holder of such nominal amount of such Notes in accordance with and subject to the terms of the relevant Global Note (and the expressions "Noteholder" and "holder of Notes" and related expressions shall be construed accordingly). For so long as The Depository Trust Company ("DTC") or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and the Notes except to the extent that in accordance with DTC's published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Notes which are represented by a Global Note will be transferable only in accordance with the rules and procedures for the time being of Euroclear, Clearstream and DTC, as the case may be. References to Euroclear, Clearstream and/or DTC shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system approved by the Issuer and the Principal Paying Agent and specified in the applicable Pricing Supplement.

2 Transfers of Registered Notes

2.1 Transfers of interests in Registered Global Notes

Transfers of beneficial interests in Registered Global Notes will be effected by DTC, Euroclear or Clearstream, as the case may be, and, in turn, by other participants and, if appropriate, indirect participants in such clearing systems acting on behalf of beneficial transferors and transferees of such interests. A beneficial interest in a Registered Global Note will, subject to compliance with all applicable legal and regulatory restrictions, be transferable for Notes in definitive form or for a beneficial interest in another Registered Global Note only in the authorized denominations set out in the applicable Pricing Supplement and only in accordance with the rules and operating procedures for the time being of DTC, Euroclear or Clearstream, as the case may be, and in accordance with the terms and conditions specified in the Agency Agreement. Transfers of a Registered Global Note registered in the name of a nominee for DTC shall be limited to transfers of such Registered Global Note, in whole but not in part, to another nominee of DTC or to a successor of DTC or such successor's nominee.

2.2 Transfers of Registered Notes in definitive form

Subject as provided in Conditions 2.5 (Transfers of Registered Notes – Transfers of interest in Regulation S Global Notes), 2.6 (Transfers of Registered Notes – Transfers of interest in Legended Notes) and 2.7 (Transfers of Registered Notes – Exchanges and transfers of Registered Notes generally) below, upon the terms and subject to the conditions set forth in the Agency Agreement, a Registered Note in definitive form may be transferred in whole or in part (in the authorized denominations set out in the applicable Pricing Supplement). In order to effect any such transfer (a) the holder or holders must (i) surrender the Registered Note for registration of the transfer of the Registered Note (or the relevant part of the Registered Note) at the specified office of the Registrar or any Transfer Agent, with the form of transfer thereon duly executed by the holder or holders thereof or his or their attorney or attorneys duly authorized in writing and (ii) complete and deposit such other certifications as may be required by the Registrar or, as the case may be, the relevant Transfer Agent and (b) the Registrar or, as the case may be, the relevant Transfer Agent must, after due and careful enquiry, be satisfied with the documents of title and the identity of the person making the request. Any such transfer will be subject to such reasonable regulations as the Issuer and the Registrar may from time to time prescribe (the initial such regulations being set out in Schedule 8 to the Agency Agreement). Subject as provided above, the Registrar or, as the case may be, the relevant Transfer Agent will, within three business days (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar or, as the case may be, the relevant Transfer Agent is located) of the request (or such longer period as may be required to comply with any applicable fiscal or other laws or regulations), authenticate, deliver, or procure the authentication and delivery of, at its specified office to the transferee or (at the risk of the transferee) send by uninsured mail, to such address as the transferee may request, a new Registered Note in definitive form of a like aggregate nominal amount to the Registered Note (or the relevant part of the Registered Note) transferred. In the case of the transfer of part only of a Registered Note in definitive form, a new Registered Note in definitive form in respect of the balance of the Registered Note not transferred will be so authenticated and delivered or (at the risk of the transferor) sent to the transferor.

2.3 Registration of transfer upon partial redemption

In the event of a partial redemption of Notes under Condition 7 (*Redemption and Purchase*), the Issuer shall not be required to register the transfer of any Registered Note, or part of a Registered Note, called for partial redemption.

2.4 Costs of registration

Noteholders will not be required to bear the costs and expenses of effecting any registration of transfer as provided above, except for any costs or expenses of delivery other than by regular uninsured mail and except that the Issuer may require the payment of a sum sufficient to cover any stamp duty, tax or other governmental charge that may be imposed in relation to the registration.

2.5 Transfers of interests in Regulation S Global Notes

Prior to expiry of the applicable Distribution Compliance Period, transfers by the holder of, or of a beneficial interest in, a Regulation S Global Note to a transferee in the United States or who is a U.S. person will only be made:

(a) upon receipt by the Transfer Agent of a written certification substantially in the form set out in the Agency Agreement, amended as appropriate (a "Transfer Certificate"), copies of which are available from the specified office of the Registrar or any Transfer Agent, from the transferor of the Note or beneficial interest therein to the effect that such transfer is being made:

  (i) to a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A; or

  (ii) to a person who is an Institutional Accredited Investor, in which case the Transfer Certificate must be accompanied by a duly executed investment letter from the relevant transferee substantially in the form set out in the Agency Agreement (an "IAI Investment Letter"); or

(b) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer of such satisfactory evidence as the Issuer may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States,

and, in each case, in accordance with any applicable securities laws of any state of the United States or any other jurisdiction.

In the case of (i) above, such transferee may take delivery through a Legended Note in global or definitive form and, in the case of (ii) above, such transferee may take delivery only through a Legended Note in definitive form. After expiry of the applicable Distribution Compliance Period (a) beneficial interests in Regulation S Global Notes registered in the name of a nominee for DTC may be held through DTC directly, by a participant in DTC, or indirectly through a participant in DTC and (b) such certification requirements will no longer apply to such transfers.

2.6 *Transfers of interests in Legended Notes*

Transfers of Legended Notes or beneficial interests therein may be made:

(a) to a transferee who takes delivery of such interest through a Regulation S Global Note, upon receipt by the Transfer Agent of a duly completed Transfer Certificate from the transferor to the effect that such transfer is being made in accordance with Regulation S and that, in the case of a Regulation S Global Note registered in the name of a nominee for DTC, if such transfer is being made prior to expiry of the applicable Distribution Compliance Period, the interests in the Notes being transferred will be held immediately thereafter through Euroclear and/or Clearstream; or

(b) to a transferee who takes delivery of such interest through a Legended Note:

   (i) where the transferee is a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A, without certification; or

   (ii) where the transferee is an Institutional Accredited Investor, subject to delivery to the Registrar of a Transfer Certificate from the transferor to the effect that such transfer is being made to an Institutional Accredited Investor, together with a duly executed IAI Investment Letter from the relevant transferee; or

(c) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer of such satisfactory evidence as the Issuer may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States;

and in each case, in accordance with any applicable securities laws of any state of the United States or any other jurisdiction.

Notes transferred by Institutional Accredited Investors to QIBs pursuant to Rule 144A or outside the United States pursuant to Regulation S will be eligible to be held by such QIBs or non-U.S. investors through DTC, Euroclear or Clearstream, as appropriate, and the Registrar will arrange for any Notes which are the subject of such a transfer to be represented by the appropriate Registered Global Note, where applicable.

Upon the transfer, exchange or replacement of Legended Notes, or upon specific request for removal of the Legend, the Registrar shall deliver only Legended Notes or refuse to remove the Legend, as the case may be, unless there is delivered to the Issuer such satisfactory evidence as may reasonably be required by the Issuer, which may include an opinion of U.S. counsel, that neither the Legend nor the restrictions on transfer set forth therein are required to ensure compliance with the provisions of the Securities Act.

2.7 *Exchanges and transfers of Registered Notes generally*

Holders of Registered Notes in definitive form, other than Institutional Accredited Investors, may exchange such Notes for interests in a Registered Global Note of the same type at any time.

2.8 *Closed Periods*

No Noteholder may require the transfer of a Registered Note to be registered during the period of 15 days ending on the due date for any payment of principal or interest or payment on that Note.

2.9 Costs of exchange or registration

Registration of transfers will be effected without charge by or on behalf of the Issuer, the Registrar or the relevant Transfer Agent, but upon payment (or the giving of such indemnity as the Registrar or the relevant Transfer Agent may reasonably require) in respect of any tax or other governmental charges which may be imposed in relation to it provided that the Issuer shall not be responsible for any documentary stamp tax payable on the transfer of Notes effected in the Republic of Korea ("Korea") unless the Issuer is the counterparty directly liable for that documentary stamp tax.

2.10 Definitions

In this Condition, the following expressions shall have the following meanings:

"Distribution Compliance Period" means the period that ends 40 days after the completion of the distribution of each Tranche of Notes, as certified by the relevant Dealer (in the case of a non-syndicated issue) or the relevant Lead Manager(s) (in the case of a syndicated issue);

"Exchange Act" means the U.S. Securities Exchange Act of 1934, as amended;

"Institutional Accredited Investor" means "accredited investors" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act that are institutions;

"Legended Note" means Registered Notes in definitive form that are issued to Institutional Accredited Investors and Registered Notes (whether in definitive form or represented by a Registered Global Note) sold in private transactions to QIBs in accordance with the requirements of Rule 144A which bear a legend specifying certain restrictions on transfer;

"QIB" means a "qualified institutional buyer" within the meaning of Rule 144A; "Regulation S" means Regulation S under the Securities Act;

"Regulation S Global Note" means a Registered Global Note representing Notes sold outside the United States in reliance on Regulation S;

"Rule 144A" means Rule 144A under the Securities Act;

"Rule 144A Global Note" means a Registered Global Note representing Notes sold in the United States or to QIBs; and

"Securities Act" means the United States Securities Act of 1933, as amended.

3 Status of the Notes

The Notes and any related Receipts and Coupons are direct, unconditional and (subject to Condition 4.1 (*Covenants – Limitation on Liens*)) unsecured obligations of the Issuer which rank pari passu among themselves and at least pari passu with all other present and future unsecured (subject to Condition 4.1 (*Covenants – Limitation on Liens*) and unsubordinated obligations of the Issuer, save for such as may be preferred by generally applicable mandatory provisions of applicable law.

4 Covenants

4.1 Limitation on Liens

So long as any of the Notes of this Series remains outstanding, the Issuer will not, and the Issuer will not permit any Subsidiary to, create, incur, issue or assume or guarantee any External Indebtedness secured by any Security Interest on any Principal Property owned by the Issuer or any Restricted Subsidiary without in any such case effectively providing that the Notes shall be secured equally and ratably with or prior to such secured External Indebtedness unless, after giving effect thereto, the aggregate principal amount of all such secured External Indebtedness would not exceed 10% of Net Assets as of the date of such creation, incurrence, issuance or assumption or guarantee of such External Indebtedness; provided that nothing contained in this Condition 4.1 shall prevent, restrict or apply to, and there shall be excluded from secured External Indebtedness in any computation under this Condition 4.1, External Indebtedness secured by:

(a) Security Interests on any property, shares of stock or indebtedness of any corporation existing at the time such corporation becomes a Subsidiary or arising thereafter pursuant to contractual commitments entered into prior to and not in contemplation of such corporation becoming a Subsidiary;

(b) Security Interests on any property, shares of stock or indebtedness existing at the time of acquisition thereof (including acquisition through merger or consolidation) or arising thereafter pursuant to contractual commitments entered into prior to and not in contemplation of the acquisition of such property, shares of stock or indebtedness;

(c) Security Interests on any Principal Property securing the payment of all or any part of the purchase price or cost of construction or improvement of any Principal Property or securing any indebtedness incurred prior to, at the time of or within 12 months after the acquisition of such Principal Property or the completion of any such construction or improvement, whichever is later, for the purpose of financing all or any part of the purchase price or cost of construction or improvement thereof (provided such Security Interests are limited to such Principal Property, improvements on such Principal Property and any other property or assets not constituting a Principal Property prior to such construction or improvement);

(d) Security Interests which secure indebtedness owing to the Issuer;

(e) any extension, renewal, alteration or replacement (or successive extensions, renewals, alterations or replacements) in whole or in part, of any Security Interest referred to in Conditions 4.1(a) to (d) above, or any refinancing of External Indebtedness, or a portion thereof, secured by a Security Interest referred to in Conditions 4.1(a) to (d) above; provided that the principal amount of External Indebtedness secured thereby shall not exceed the principal amount of External Indebtedness so secured at the time of such extension, renewal, alteration or replacement or the principal amount of External Indebtedness being refinanced, and that such extension, renewal, alteration, replacement or refinancing shall be limited to all or a part of the property (plus improvements on such property) which secured the Security Interest so extended, renewed, altered or replaced or relating to the External Indebtedness so refinanced; and

(f) Security Interests arising by operation of law.

For the purposes of this Condition 4.1, the giving of a guarantee which is secured by a Security Interest on a Principal Property, and the creation of a Security Interest on a Principal Property to secure External Indebtedness which existed prior to the creation of such Security Interest, shall be deemed to involve the creation of indebtedness in an amount equal to the principal amount guaranteed or secured by such Security Interest; but the amount of indebtedness secured by Security Interests on Principal Properties shall be computed without cumulating the underlying indebtedness with any guarantee thereof or Security Interest securing the same.

4.2 Limitation upon Sale and Leaseback Transactions

So long as any of the Notes of this Series remains outstanding, the Issuer will not, and the Issuer will not permit any Restricted Subsidiary to, enter into any arrangement after the date of the applicable Pricing Supplement with any Person (other than the Issuer) providing for the leasing by the Issuer or any Restricted Subsidiary of any Principal Property (except a lease for a temporary period not to exceed three years by the end of which it is intended that the use of such Principal Property by the lessee will be discontinued), which was or is owned by the Issuer and which has been or is to be sold or transferred to such Person or to any other Person to whom funds are advanced by such Person or to any other Person to whom funds have been or are to be advanced by such Person on the security of such Principal Property (herein referred to as a "sale and leaseback transaction") unless either:

(a) the Attributable Debt of the Issuer and its Restricted Subsidiaries in respect of such sale and leaseback transaction and all other, sale and leaseback transactions entered into after the date of the applicable Pricing Supplement (other than such sale and leaseback transactions as are permitted by Condition 4.2(b) below), plus the aggregate principal amount of External Indebtedness secured by Security Interests on Principal Properties then outstanding (excluding any such External Indebtedness secured by Security Interests described in paragraphs (a) through (f) of Condition 4.1) without equally and ratably securing the Notes, would not exceed 10% of Net Assets as of the date of such sale and leaseback transaction; or

(b) the Issuer, within 12 months after the sale or transfer, applies or causes a Restricted Subsidiary

to apply an amount equal to the greater of (i) the net proceeds of such sale or transfer or (ii) the fair market value of the property so sold and leased back at the time of entering into such sale and leaseback transaction (in each case as determined in good faith by the Issuer) to the retirement of External Indebtedness of the Issuer or a Restricted Subsidiary which is not subordinate to the Notes.

4.3 Interpretation

In these Conditions, the following expressions shall have the following meanings:

"Attributable Debt" means, as to any lease, at the date of determination, the total net amount of rent required to be paid under such lease during the remaining term thereof including renewal terms at the option of the lessor (excluding amounts on account of maintenance and repairs, insurance, taxes, assessments, water rates and similar charges and contingent rents), discounted from their respective due dates at the rate of interest specified in the applicable Pricing Supplement;

Notwithstanding the foregoing, where the Issuer or any Subsidiary is the lessee in any sale and leaseback transaction, Attributable Debt shall not include any External Indebtedness resulting from the guarantee by the Issuer or any other Subsidiary of the lessee's obligation thereunder.

"External Indebtedness" means any obligation for the payment or repayment of money borrowed (including any guarantees thereof) which is denominated in a currency other than the currency of Korea and which has a final maturity of one year or more from its date of incurrence or issuance;

"Long-term Debt" means any note, bond, debenture or other indebtedness for money borrowed having a maturity of more than one year from the date such indebtedness was incurred or having a maturity of less than one year but by its terms being renewable or extendible, at the option of the borrower, beyond one year from the date such evidence of indebtedness was incurred;

"Net Assets" means the total amount of the assets of the Issuer and its consolidated Subsidiaries, including investments in unconsolidated Subsidiaries, after deducting therefrom (i) all current liabilities (excluding any current liabilities constituting Long-term Debt by reason of their being renewable or extendible at the option of the Issuer or its Subsidiary) and (ii) all goodwill, trade names, trademarks, patents, unamortized debt discount and expense and other like intangible assets (other than expressway operating rights), all as set forth on the most recent statement of financial position of the Issuer and its consolidated Subsidiaries and computed in accordance with the Government Accounting Standards for Public Corporations and Quasi-governmental Institutions in the Republic of Korea;

"Person" means any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision thereof;

"Principal Property" means any asset or property located in Korea, whether at the date of the applicable Pricing Supplement owned or thereafter acquired (including any expressway operating rights), other than any such asset or property, or portion thereof, reasonably determined by the board of directors of the Issuer not to be of material importance to the total business conducted by the Issuer and its Subsidiaries as a whole;

"Restricted Subsidiary" means any Subsidiary that owns a Principal Property.

"Security Interest" means any mortgage, pledge, lien, fixed or floating charge or other encumbrance; and

"Subsidiary" means any corporation or other entity of which securities or other ownership interests having ordinary voting power to elect a majority of the board of directors or other Persons performing similar functions are at the time directly or indirectly owned by the Issuer.

5 Interest

5.1 Interest on Fixed Rate Notes

Each Fixed Rate Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date at the rate(s) per annum equal to the Rate(s) of Interest. Interest will be payable in arrears on the Interest Payment Date(s) in each year up to (and including) the Maturity Date.

If the Fixed Rate Notes are in definitive form, except as provided in the applicable Pricing Supplement, the amount of interest payable on each Interest Payment Date in respect of the Fixed Interest Period ending on (but excluding) such date will amount to the Fixed Coupon Amount. Payments of interest on any Interest Payment Date will, if so specified in the applicable Pricing Supplement, amount to the Broken Amount so specified.

As used in these Conditions, "Fixed Interest Period" means the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date.

If interest is required to be calculated for a period other than a Fixed Interest Period, such interest shall be calculated in respect of any period by applying the Rate of Interest to:

(a) in the case of Fixed Rate Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Fixed Rate Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or

(b) in the case of Fixed Rate Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Fixed Rate Note in definitive form is a multiple of the Calculation Amount, the amount of interest payable in respect of such Fixed Rate Note shall be the product of the amount (determined in the manner provided above) for the Calculation Amount and the amount by which the Calculation Amount is multiplied to reach the Specified Denomination, without any further rounding.

"Day Count Fraction" means, in respect of the calculation of an amount of interest, in accordance with this Condition 5.1:

(A) if Actual/Actual (ICMA) is specified in the applicable Pricing Supplement:

(1) in the case of Notes where the number of days in the relevant period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (the "Accrual Period") is equal to or shorter than the Determination Period during which the Accrual Period ends, the number of days in such Accrual Period divided by the product of (I) the number of days in such Determination Period and (II) the number of Determination Dates (as specified in the applicable Pricing Supplement) that would occur in one calendar year; or

(2) in the case of Notes where the Accrual Period is longer than the Determination Period during which the Accrual Period ends, the sum of:

(i) the number of days in such Accrual Period falling in the Determination Period in which the Accrual Period begins divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates that would occur in one calendar year; and

(ii) the number of days in such Accrual Period falling in the next Determination Period divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates that would occur in one calendar year; and

(B) if "30/360" is specified in the applicable Pricing Supplement, the number of days in the period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (such number of days being calculated on the basis of a year of 360 days with 12 30-day months) divided by 360.

In these Conditions:

"Determination Period" means each period from (and including) a Determination Date to but excluding the next Determination Date (including, where either the Interest Commencement Date or the final Interest Payment Date is not a Determination Date, the period commencing on the first Determination Date prior to, and ending on the first Determination Date falling after, such date); and

"sub-unit" means, with respect to any currency other than Euro, the lowest amount of such currency that is available as legal tender in the country of such currency and, with respect to Euro, means one cent.

5.2 Interest on Floating Rate Notes and Index Linked Interest Notes

(a) Interest Payment Dates

Each Floating Rate Note and Index Linked Interest Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date and such interest will be payable in arrears on either:

(A) the Specified Interest Payment Date(s) in each year specified in the applicable Pricing Supplement; or

(B) if no Specified Interest Payment Date(s) is/are specified in the applicable Pricing Supplement, each date (each such date, together with each Specified Interest Payment Date, an "Interest Payment Date") which falls the number of months or other period specified as the Specified Period in the applicable Pricing Supplement after the preceding Interest Payment Date or, in the case of the first Interest Payment Date, after the Interest Commencement Date.

Such interest will be payable in respect of each Interest Period (which expression shall, in these Conditions, mean the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date).

If a Business Day Convention is specified in the applicable Pricing Supplement and (x) if there is no numerically corresponding day in the calendar month in which an Interest Payment Date should occur or (y) if any Interest Payment Date would otherwise fall on a day which is not a Business Day, then, if the Business Day Convention specified is:

(1) in any case where Specified Periods are specified in accordance with Condition 5.2(a)(B) above, the Floating Rate Convention, such Interest Payment Date (i) in the case of (x) above, shall be the last day that is a Business Day in the relevant month and the provisions of (B) below of this subparagraph (1) shall apply *mutatis mutandis* or (ii) in the case of (y) above, shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event (A) such Interest Payment Date shall be brought forward to the immediately preceding Business Day and (B) each subsequent Interest Payment Date shall be the last Business Day in the month which falls the Specified Period after the preceding applicable Interest Payment Date occurred; or

(2) the Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day; or

(3) the Modified Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event such Interest Payment Date shall be brought forward to the immediately preceding Business Day; or

(4) the Preceding Business Day Convention, such Interest Payment Date shall be brought forward to the immediately preceding Business Day.

In these Conditions, "Business Day" means a day which is both:

(A) a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in any Additional Business Center specified in the applicable Pricing Supplement; and

(B) either (1) in relation to any sum payable in a Specified Currency other than Euro, a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the principal financial center of the country of the relevant Specified Currency (if other than London, the City of New York and any Additional Business Center and which if the Specified Currency is Australian dollars or New Zealand dollars shall be Melbourne or Wellington, respectively) or (2) in relation to any sum payable in Euro, a day on which the Trans-European Automated Real Time Gross Settlement Express Transfer (TARGET2) System (the "TARGET2 System") is open.

(b) *Rate of Interest*

The Rate of Interest payable from time to time in respect of Floating Rate Notes and Index Linked Interest Notes will be determined in the manner specified in the applicable Pricing Supplement.

(A) ISDA Determination for Floating Rate Notes

Where ISDA Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will be the relevant ISDA Rate plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any). For the purposes of this subparagraph (A), "ISDA Rate" for an Interest Period means a rate equal to the Floating Rate that would be determined by the Principal Paying Agent under an interest rate swap transaction if the Principal Paying Agent were acting as Calculation Agent for that swap transaction under the terms of an agreement incorporating the 2006 ISDA Definitions, as published by the International Swaps and Derivatives Association, Inc. and as amended and updated as at the Issue Date of the first Tranche of the Notes (the "ISDA Definitions"), and under which:

(1) the Floating Rate Option is as specified in the applicable Pricing Supplement;

(2) the Designated Maturity is a period specified in the applicable Pricing Supplement; and

(3) the relevant Reset Date is either (i) if the applicable Floating Rate Option is based on the Euro-zone inter-bank offered rate ("EURIBOR"), the first day of that Interest Period or (ii) in any other case, as specified in the applicable Pricing Supplement.

For the purposes of this sub-paragraph (A), "Floating Rate," "Calculation Agent," "Floating Rate Option," "Designated Maturity" and "Reset Date" shall have the meanings given to those terms in the ISDA Definitions.

(B) Screen Rate Determination for Floating Rate Notes – Term Rates

(1) Where Screen Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, and unless the Reference Rate in respect of the relevant Series of Floating Rate Notes is specified in the applicable Pricing Supplement as being SOFR Benchmark, the Rate of Interest for each Interest Period will, subject as provided below, be either;

(i) the offered quotation; or

(ii) the arithmetic mean (rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards) of the offered quotations, (expressed as a percentage rate per annum) for the Reference Rate which appears or appear, as the case may be, on the Relevant Screen Page (or any other such page as may replace that page on the relevant service, or such other service as may be nominated as the information vendor, for the purpose of displaying comparable rates) (the "Relevant Screen Page Rate") as at 11.00 a.m. (Brussels time, in the case of EURIBOR or Hong Kong time, in the case of HIBOR) on the Interest Determination Date in question plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any), all as determined by the Principal Paying Agent. If five or more of such offered quotations are available on the Relevant Screen Page, the highest (or, if there is more than one such highest quotation, one only of such quotations) and the lowest (or, if there is more than one such lowest quotation, one only of such quotations) shall be disregarded by the Principal Paying Agent for the purpose of determining the arithmetic mean (rounded as provided above) of such offered quotations.

(A) If the Relevant Screen Page is not available or, if in the case of Condition 5.2(b)(B)(1)(i) above, no such offered quotation appears or, in the case of Condition 5.2(b)(B)(1)(ii) above, fewer than three such offered quotations appear, in each case as at the Specified Time, the Issuer shall request each of the Reference Banks (as defined below) to provide the Principal Paying Agent with its offered quotation (expressed as a percentage rate per annum) for the Reference Rate at approximately the Specified Time on the Interest Determination Date in question. If two or more of the Reference Banks provide the Principal Paying Agent with such offered quotations, the Rate of Interest for the Interest Period shall be the arithmetic mean (rounded if necessary to the fifth decimal place with 0.000005 being rounded upwards) of the offered quotations plus or minus (as appropriate) the Margin (if any), all as determined by the Principal Paying Agent.

(B) If on any Interest Determination Date one only or none of the Reference Banks provides the Principal Paying Agent with an offered quotation as provided in the preceding paragraph, the Rate of Interest for the relevant Interest Period shall be the rate per annum which the Principal Paying Agent determines as being the arithmetic mean (rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards) of the rates, as communicated to (and at the request of) the Principal Paying Agent by the Reference Banks or any two or more of them, at which such banks were offered, at approximately the Specified Time on the relevant Interest Determination Date, deposits in the Specified Currency for a period equal to that which would have been used for the Reference Rate by leading banks in the Euro-zone inter-bank market (if the Reference Rate is EURIBOR) or in the Hong Kong inter-bank market (if the Reference Rate is HIBOR), in each case, plus or minus (as appropriate) the Margin (if any) or, if fewer than two of the Reference Banks provide the Principal Paying Agent with offered rates, the offered rate for deposits in the Specified Currency for a period equal to that which would have been used for the Reference Rate, or the arithmetic mean (rounded as provided above) of the offered rates for deposits in the Specified

Currency for a period equal to that which would have been used for the Reference Rate, at which, at approximately the Specified Time on the relevant Interest Determination Date, any one or more banks (which bank or banks is or are in the opinion of the Issuer suitable for the purpose) informs the Principal Paying Agent it is quoting to leading banks in the Euro-zone inter-bank market (if the Reference Rate is EURIBOR) or in the Hong Kong inter-bank market (if the Reference Rate is HIBOR), in each case, plus or minus (as appropriate) the Margin (if any), provided that, if the Rate of Interest cannot be determined in accordance with the foregoing provisions of this paragraph, the Rate of Interest shall be determined as at the last preceding Interest Determination Date (though substituting, where a different Margin is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin relating to the relevant Interest Period, in place of the Margin relating to that last preceding Interest Period).

(C) "Reference Banks" means, in the case of a determination of EURIBOR, the principal Euro-zone office of four major banks in the Euro-zone inter-bank market, or in the case of a determination of HIBOR, the principal Hong Kong office of four major banks in the Hong Kong inter-bank market, in each case selected by the Principal Paying Agent or as specified in the applicable Pricing Supplement.

(D) The Agency Agreement contains provisions for determining the Rate of Interest in the event that the Relevant Screen Page is not available or if, in the case of (i) above, no such offered quotation appears or, in the case of (ii) above, fewer than three such offered quotations appear, in each case as at the time specified in the preceding paragraph. Notwithstanding the foregoing, if the Issuer determines that the absence of quotations is due to the discontinuation of the Relevant Screen Page Rate, then the Reference Rate will be determined in accordance with Condition 5.2(b)(B)(2) below.

(E) If the Reference Rate from time to time in respect of Floating Rate Notes is specified in the applicable Pricing Supplement as being other than EURIBOR or HIBOR, the Rate of Interest in respect of such Notes will be determined as provided in the applicable Pricing Supplement.

(2) If Benchmark Replacement (General) is specified as being applicable in the applicable Pricing Supplement:

(i) Independent Adviser: If a Benchmark Event occurs in relation to an Original Reference Rate when any Rate of Interest (or any component part thereof) remains to be determined by reference to such Original Reference Rate the Issuer shall use its reasonable endeavours to appoint an Independent Adviser, as soon as reasonably practicable, to determine a Successor Rate, failing which an Alternative Rate (in accordance with Condition 5.2(b)(B)(2)(ii) and, in either case, an Adjustment Spread and any Benchmark Amendments (in accordance with 5.2(b)(B)(2)(iv). In making such determination, the Independent Adviser appointed pursuant to this Condition 5.2(b)(B)(2) shall act in good faith and in a commercially reasonable manner as an expert. In the absence of bad faith or fraud, the Independent Adviser shall have no liability whatsoever to the Issuer, the Principal Paying Agent, the Paying Agents, or the Noteholders for any determination made by it, pursuant to this Condition 5.2(b)(B)(2).

If (i) the Issuer is unable to appoint an Independent Adviser; or (ii) the Independent Adviser appointed by it fails to determine a Successor Rate or, failing which, an Alternative Rate in accordance with this Condition 5.2(b)(B)(2)(i) prior to the date which is 10 business days prior to the relevant Interest Determination Date, the Rate of Interest applicable to the next succeeding Interest Period shall be equal to the Rate of Interest last determined in relation to Floating Rate Notes in respect of the immediately preceding Interest Period. If there has not been a first Interest Payment Date, the Rate of Interest shall be the initial Rate of Interest. Where a different Margin or Maximum or Minimum Rate of Interest is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin or Maximum or Minimum Rate of Interest relating to the relevant Interest Period shall be substituted in place of the Margin or Maximum or Minimum Rate of Interest relating to that last preceding Interest Period. For the avoidance of doubt, this paragraph shall apply to the relevant next succeeding Interest Period only and any subsequent Interest Periods are subject to the subsequent operation of, and to adjustment as provided in, the first paragraph of this Condition 5.2(b)(B)(2)(i).

(ii) Successor Rate or Alternative Rate: If the Independent Adviser, determines that:

a. there is a Successor Rate, then such Successor Rate and the applicable Adjustment Spread shall subsequently be used in place of the Original Reference Rate to determine the Rate of Interest (or the relevant component part thereof) for all future payments of interest on Floating Rate Notes (subject to the operation of this Condition 5.2(b)(B)(2)); or

b. there is no Successor Rate but that there is an Alternative Rate, then such Alternative Rate and the applicable Adjustment Spread shall subsequently be used in place of the Original Reference Rate to determine the Rate of Interest (or the relevant component part thereof) for all future payments of interest on Floating Rate Notes (subject to the operation of this Condition 5.2(b)(B)(2)).

(iii) Adjustment Spread: The Adjustment Spread (or the formula or methodology for determining the Adjustment Spread) shall be applied to the Successor Rate or the Alternative Rate (as the case may be). If the Independent Adviser is unable to determine the quantum of, or a formula or methodology for determining, such Adjustment Spread, then the Successor Rate or Alternative Rate (as applicable) will apply without an Adjustment Spread.

(iv) Benchmark Amendments: If any Successor Rate or Alternative Rate and, in either case, the applicable Adjustment Spread is determined in accordance with this Condition 5.2(b)(B)(2) and the Independent Adviser, determines (i) that amendments to these Conditions and/or the Agency Agreement are necessary to ensure the proper operation of such Successor Rate or Alternative Rate and/or (in either case) the applicable Adjustment Spread (such amendments, the "Benchmark Amendments") and (ii) the terms of the Benchmark Amendments, then the Issuer shall, subject to giving notice thereof in accordance with Condition 5.2(b)(B)(2)(v), without any requirement for the consent or approval of Noteholders, vary these Conditions and/or the Agency Agreement to give effect to such Benchmark Amendments with effect from the date specified in such notice.

Notwithstanding any other provision of this Condition 5.2(b)(B)(2), the Calculation Agent or any Paying Agent is not obliged to concur with the Issuer or the Independent Adviser in respect of any changes or amendments as contemplated under this Condition 5.2(b)(B)(2) to which, in the sole opinion of the Calculation Agent or the relevant Paying Agent, as the case may be, would impose more onerous obligations upon it or expose it to any additional duties, responsibilities or liabilities or reduce or amend the protective provisions afforded to the Calculation Agent or the relevant Paying Agent (as applicable) in the Agency Agreement and/or these Conditions.

In connection with any such variation in accordance with this Condition 5.2(b)(B)(2)(iv), the Issuer shall comply with the rules of any stock exchange on which the Floating Rate Notes are for the time being listed or admitted to trading.

(v) Notices, etc.: Any Successor Rate, Alternative Rate, Adjustment Spread and the specific terms of any Benchmark Amendments determined under this Condition 5.2(b)(B)(2) will be notified at least 10 business days prior to the relevant Interest Determination Date by the Issuer to the Principal Paying Agent, the Calculation Agent, the Paying Agents. In accordance with Condition 12, notice shall be provided to the Noteholders promptly thereafter. Such notice shall be irrevocable and shall specify the effective date of the Benchmark Amendments, if any.

No later than notifying the Noteholders of the same, the Issuer shall deliver to the Principal Paying Agent, the Calculation Agent and the Paying Agents a certificate signed by two directors of the Issuer:

a. confirming (i) that a Benchmark Event has occurred, (ii) the Successor Rate or, as the case may be, the Alternative Rate, (iii) the applicable Adjustment Spread and (iv) the specific terms of the Benchmark Amendments (if any), in each case as determined in accordance with the provisions of this Condition 5.2(b)(B)(2); and

b. certifying that the Benchmark Amendments (if any) are necessary to ensure the proper operation of such Successor Rate or Alternative Rate and (in either case) the applicable Adjustment Spread.

Each of the Principal Paying Agent, the Calculation Agent and the Paying Agents shall be entitled to rely on such certificate (without liability to any person) as sufficient evidence thereof. The Successor Rate or Alternative Rate and the Adjustment Spread and the Benchmark Amendments (if any) specified in such certificate will (in the absence of manifest error or bad faith in the determination of the Successor Rate or Alternative Rate and the Adjustment Spread and the Benchmark Amendments (if any) and without prejudice to the Principal Paying Agent's or the Calculation Agent's or the Paying Agents' ability to rely on such certificate as aforesaid) be binding on the Issuer, the Principal Paying Agent, the Calculation Agent, the Paying Agents and the Noteholders.

Notwithstanding any other provision of this Condition 5.2(b)(B)(2), if following the determination of any Successor Rate, Alternative Rate, Adjustment Spread or Benchmark Amendments (if any), in the Calculation Agent's opinion there is any uncertainty between two or more alternative courses of action in making any determination or calculation under this Condition 5.2(b)(B)(2), the Calculation Agent shall promptly notify the Issuer thereof and the Issuer shall direct the Calculation Agent in writing as to which alternative course of action to adopt. If the Calculation Agent is not promptly provided with such direction, or is otherwise unable (other than due to its own gross negligence, willful default or fraud) to make such calculation or determination for any reason, it shall notify the Issuer thereof and the Calculation Agent shall be under no obligation to make such calculation or determination and (in the absence of such gross negligence, willful default or fraud) shall not incur any liability for not doing so.

(vi) Survival of Original Reference Rate: Without prejudice to the obligations of the Issuer under Condition 5.2(b)(B)(2)(i), Condition 5.2(b)(B)(2)(ii), Condition 5.2(b)(B)(2)(iii) and Condition 5.2(b)(B)(2)(iv), the Original Reference Rate and the fallback provisions provided for in Condition 5.2(b)(B)(1) will continue to apply unless and until a Benchmark Event has occurred.

(vii) Definitions: As used in this Condition 5.2(b)(B)(2):

"Adjustment Spread" means either (a) a spread (which may be positive, negative or zero) or (b) a formula or methodology for calculating a spread, in each case to be applied to the Successor Rate or the Alternative Rate (as the case may be) and is the spread, formula or methodology which:

a. (in the case of a Successor Rate, is formally recommended in relation to the replacement of the Original Reference Rate with the Successor Rate by any Relevant Nominating Body; or (if no such recommendation has been made, or in the case of an Alternative Rate);

b. the Independent Adviser determines, is customarily applied to the relevant Successor Rate or the Alternative Rate (as the case may be) in international debt capital markets transactions to produce an industry-accepted replacement rate for the Original Reference Rate; or (if the Independent Adviser determines that no such spread is customarily applied);

c. the Independent Adviser determines is recognised or acknowledged as being the industry standard for over-the-counter derivative transactions which reference the Original Reference Rate, where such rate has been replaced by the Successor Rate or the Alternative Rate (as the case may be).

"Alternative Rate" means an alternative benchmark or screen rate which the Independent Adviser determines in accordance with Condition 5.2(b)(B)(2)(ii) is customarily applied in international debt capital markets transactions for the purposes of determining rates of interest (or the relevant component part thereof) in the same Specified Currency as the Floating Rate Notes.

"Benchmark Amendments" has the meaning given to it in Condition 5.2(b)(B)(2)(iv).

"Benchmark Event" means:

a. the Original Reference Rate ceasing to be published for a period of at least 5 Business Days or ceasing to exist; or

b. a public statement by the administrator of the Original Reference Rate that it has ceased or that it will cease publishing the Original Reference Rate permanently or indefinitely (in circumstances where no successor administrator has been appointed that will continue publication of the Original Reference Rate); or

c. a public statement by the supervisor of the administrator of the Original Reference Rate, that the Original Reference Rate has been or will be permanently or indefinitely discontinued; or

d. a public statement by the supervisor of the administrator of the Original Reference Rate as a consequence of which the Original Reference Rate will be prohibited from being used either generally, or in respect of the Floating Rate Notes; or

e. the making of a public statement by the supervisor of the administrator of the Original Reference Rate that, with effect from a date after 31 December 2021, the Original Reference Rate is or will be (or is or will be deemed by such supervisor to be) no longer representative of its relevant underlying market; or

f. it has become unlawful for any Paying Agent, the Calculation Agent, the Issuer or other party to calculate any payments due to be made to any Noteholder using the Original Reference Rate;

provided that the Benchmark Event shall be deemed to occur (a) in the case of sub-paragraphs b. and c. above, on the date of the cessation of publication of the Original Reference Rate or the discontinuation of the Original Reference Rate, as the case may be, (b) in the case of sub-paragraph d. above, on the date of the prohibition of use of the Original Reference Rate and (c) in the case of sub-paragraph e. above, on the date with effect from which the Original Reference Rate will no longer be (or will be deemed by the relevant supervisor to no longer be) representative of its relevant underlying market and which is specified in the relevant public statement, and, in each case, not the date of the relevant public statement.

The occurrence of a Benchmark Event shall be determined by the Issuer and promptly notified to the Principal Paying Agent, the Calculation Agent and the Paying Agents. For the avoidance of doubt, neither the Principal Paying Agent, the Calculation Agent nor the Paying Agents shall have any responsibility for making such determination.

"business day" means a day, other than a Saturday or Sunday, on which banks are open for business in the place of the specified office of the Calculation Agent.

"Independent Adviser" means an independent financial institution of international repute or an independent financial adviser with appropriate expertise appointed by the Issuer under Condition 5.2(b)(B)(2)(i).

"Original Reference Rate" means the originally-specified benchmark or screen rate (as applicable) used to determine the Rate of Interest (or any component part thereof) on the Floating Rate Notes.

"Relevant Nominating Body" means, in respect of a benchmark or screen rate (as applicable):

a. the central bank for the currency to which the benchmark or screen rate (as applicable) relates, or any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable); or

b. any working group or committee sponsored by, chaired or co-chaired by or constituted at the request of (a) the central bank for the currency to which the benchmark or screen rate (as applicable) relates, (b) any central bank or other supervisory authority which is responsible for supervising the administrator of the benchmark or screen rate (as applicable), (c) a group of the aforementioned central banks or other supervisory authorities or (d) the Financial Stability Board or any part thereof.

"Successor Rate" means a successor to or replacement of the Original Reference Rate which is formally recommended by any Relevant Nominating Body.

(C) Screen Rate Determination for Floating Rate Notes where the Reference Rate is specified as being SOFR Benchmark

Where Screen Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined where the Reference Rate is SOFR Benchmark, the Rate of Interest for each Interest Period will, subject as provided below, be equal to the relevant SOFR Benchmark plus or minus the Margin (if any), all as determined by the Calculation Agent on the relevant Interest Determination Date.

The "SOFR Benchmark" will be determined based on Compounded Daily SOFR or SOFR Index, as follows (subject in each case to Condition 5.2(e) as further specified hereon):

(1) If Compounded Daily SOFR ("**Compounded Daily SOFR**") is specified in the applicable Pricing Supplement as the manner in which the SOFR Benchmark will be determined, the SOFR Benchmark for each Interest Period shall be equal to the compounded average of daily SOFR reference rates for each day during the relevant Interest Period (where SOFR Lag is specified in the applicable Pricing Supplement to determine Compounded Daily SOFR) or the SOFR Observation Period (where SOFR Observation Shift is specified in the applicable Pricing Supplement to determine Compounded Daily SOFR).

Compounded Daily SOFR shall be calculated by the Calculation Agent in accordance with one of the formulas referenced below depending upon which is specified in the applicable Pricing Supplement:

(A) SOFR Lag:

$$\left(\prod_{i=1}^{d_o}\left(1 + \frac{SOFR_{i-xUSBD} \times n_i}{360}\right) - 1\right) \times \frac{360}{d}$$

with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 per cent. being rounded upwards (e.g., 9.876541 per cent. (or 0.09876541) being rounded down to 9.87654 per cent. (or 0.0987654) and 9.876545 per cent. (or 0.09876545) being rounded up to 9.87655 per cent. (or 0.0987655)) and where:

"$\mathbf{SOFR_{i-xUSBD}}$" for any U.S. Government Securities Business Day "i" in the relevant Interest Period, is equal to the SOFR reference rate for the U.S. Government Securities Business Day falling the number of Lookback Days prior to that U.S. Government Securities Business Day "i";

"**Lookback Days**" means such number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement;

"**d**" means the number of calendar days in the relevant Interest Period;

"**d_o**" for any Interest Period, means the number of U.S. Government Securities Business Days in the relevant Interest Period;

"**i**" means a series of whole numbers ascending from one to d_o, representing each relevant U.S. Government Securities Business Day from (and including) the first U.S. Government Securities Business Day in the relevant Interest Period (each a "**U.S. Government Securities Business Day "i"**"); and

"**n_i**" for any U.S. Government Securities Business Day "i" means the number of calendar days from (and including) such U.S. Government Securities Business Day "i" up to (but excluding) the following U.S. Government Securities Business Day.

(B) SOFR Observation Shift:

$$\left(\prod_{i=1}^{d_o}\left(1 + \frac{SOFR_i \times n_i}{360}\right) - 1\right) \times \frac{360}{d}$$

with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 per cent. being rounded upwards (e.g., 9.876541 per cent. (or 0.09876541) being rounded down to 9.87654 per cent. (or 0.0987654) and 9.876545 per cent. (or 0.09876545) being rounded up to 9.87655 per cent. (or 0.0987655)) and where:

"**$SOFR_i$**" for any U.S. Government Securities Business Day "i" in the relevant SOFR Observation Period, is equal to the SOFR reference rate for that U.S. Government Securities Business Day "i";

"**SOFR Observation Period**" means, in respect of an Interest Period, the period from (and including) the date falling the number of SOFR Observation Shift Days prior to the first day of such Interest Period to (but excluding) the date falling the number of SOFR Observation Shift Days prior to the Interest Payment Date for such Interest Period;

"**SOFR Observation Shift Days**" means the number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement;

"**d**" means the number of calendar days in the relevant SOFR Observation Period;

"$\mathbf{d_o}$" for any SOFR Observation Period, means the number of U.S. Government Securities Business Days in the relevant SOFR Observation Period;

"**i**" means a series of whole numbers ascending from one to do, representing each U.S. Government Securities Business Day from (and including) the first U.S. Government Securities Business Day in the relevant SOFR Observation Period (each a "**U.S. Government Securities Business Day "i"**"); and

"$\mathbf{n_i}$" for any U.S. Government Securities Business Day "i" means the number of calendar days from (and including) such U.S. Government Securities Business Day "i" up to (but excluding) the following U.S. Government Securities Business Day.

The following defined terms shall have the meanings set out below for purpose of this 5.2(b)(C)(1):

"**Bloomberg Screen SOFRRATE Page**" means the Bloomberg screen designated "SOFRRATE" or any successor page or service;

"**Reuters Page USDSOFR=**" means the Reuters page designated "USDSOFR=" or any successor page or service;

"**SOFR**" means, in respect of a U.S. Government Securities Business Day, the reference rate determined by the Calculation Agent in accordance with the following provision:

(i) the Secured Overnight Financing Rate published at the SOFR Determination Time as such reference rate is reported on the Bloomberg Screen SOFRRATE Page; the Secured Overnight Financing Rate published at the SOFR Determination Time as such reference rate is reported on the Reuters Page USDSOFR=; or the Secured Overnight Financing Rate published at the SOFR Determination Time on the SOFR Administrator's Website;

(ii) if the reference rate specified in (i) above does not appear and a SOFR Benchmark Transition Event and its related SOFR Benchmark Replacement Date have not occurred, the SOFR reference rate shall be the reference rate published on the SOFR Administrator's Website for the first preceding U.S. Government Securities Business Day for which SOFR was published on the SOFR Administrator's Website; or

(iii) if the reference rate specified in (i) above does not appear and a SOFR Benchmark Transition Event and its related SOFR Benchmark Replacement Date have occurred, the provisions set forth in Condition 5.2(e) shall apply as specified in the applicable Pricing Supplement;

"**SOFR Determination Time**" means approximately 3:00 p.m. (New York City time) on the immediately following U.S. Government Securities Business Day.

(2) If SOFR Index ("**SOFR Index**") is specified in the applicable Pricing Supplement, the SOFR Benchmark for each Interest Period shall be equal to the compounded average of daily SOFR reference rates for each day during the relevant SOFR Observation Period as calculated by the Calculation Agent as follows:

$$\left(\frac{SOFR\ Index_{End}}{SOFR\ Index_{Start}} - 1\right) \times \left(\frac{360}{d_c}\right)$$

with the resulting percentage being rounded, if necessary, to the nearest one hundred-thousandth of a percentage point, with 0.000005 per cent. being rounded upwards (e.g., 9.876541 per cent. (or 0.09876541) being rounded down to 9.87654 per cent. (or 0.0987654) and 9.876545 per cent. (or 0.09876545) being rounded up to 9.87655 per cent. (or 0.0987655)) and where:

"**SOFR Index**" means, in respect of a U.S. Government Securities Business Day, the SOFR Index value as published on the SOFR Administrator's Website at the SOFR Index Determination Time on such U.S. Government Securities Business Day, *provided that*:

(A) if the value specified above does not appear and a SOFR Benchmark Transition Event and its related SOFR Benchmark Replacement Date have not occurred, the "SOFR Index" shall be calculated on any Interest Determination Date with respect to an Interest Period, in accordance with the Compounded Daily SOFR formula described above in Condition 5.2(b)(C)(1)(B) "SOFR Observation Shift", and the term "SOFR Observation Shift Days" shall mean five U.S. Government Securities Business Days; or

(B) if the value specified above does not appear and a SOFR Benchmark Transition Event and its related SOFR Benchmark Replacement Date have occurred, the provisions set forth in Condition 5.2(e) shall apply as specified in the applicable Pricing Supplement;

"**SOFR Index$_{\mathbf{End}}$**" means, in respect of an Interest Period, the SOFR Index value on the date that is the number of U.S. Government Securities Business Days specified in the applicable Pricing Supplement prior to the Interest Payment Date for such Interest Period (or in the final Interest Period, the Maturity Date);

"**SOFR Index$_{\mathbf{Start}}$**" means, in respect of an Interest Period, the SOFR Index value on the date that is the number of U.S. Government Securities Business Days specified hereon prior to the first day of such Interest Period;

"**SOFR Index Determination Time**" means, in respect of a U.S. Government Securities Business Day, approximately 3:00 p.m. (New York City time) on such U.S. Government Securities Business Day;

"**SOFR Observation Period**" means, in respect of an Interest Period, the period from (and including) the date falling the number of SOFR Observation Shift Days prior to the first day of such Interest Period to (but excluding) the date falling the number of SOFR Observation Shift Days prior to the Interest Payment Date for such Interest Period;

"**SOFR Observation Shift Days**" means the number of U.S. Government Securities Business Days as specified in the applicable Pricing Supplement; and

"**d_c**" means the number of calendar days in the applicable SOFR Observation Period.

The following defined terms shall have the meanings set out below for purpose of this Condition 5.2(b)(C):

"**Interest Determination Date**" means, with respect to a Rate of Interest and Interest Period, the date specified as such in the applicable Pricing Supplement or, if none is so specified, the second U.S. Government Securities Business Day prior to the last day of each Interest Period;

"**SOFR Administrator's Website**" means the website of the Federal Reserve Bank of New York (currently, being *https://www.newyorkfed.org/markets/reference-rates/sofr-averages-and-index*), or any successor source;

"**SOFR Benchmark Replacement Date**" means the Benchmark Replacement Date with respect to the then-current Benchmark;

"**SOFR Benchmark Transition Event**" means the occurrence of a Benchmark Event with respect to the then-current Benchmark; and

"**U.S. Government Securities Business Day**" means any day except for a Saturday, a Sunday or a day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities

(3) If the Notes become due and payable in accordance with Condition 10, the final Interest Determination Date shall, notwithstanding any Interest Determination Date specified hereon, be deemed to be the date on which the Notes became due and payable and the Rate of Interest on the Notes shall, for so long as the Notes remain outstanding, be that determined on such date.

(c) Minimum Rate of Interest and/or Maximum Rate of Interest

If the applicable Pricing Supplement specifies a Minimum Rate of Interest for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of Condition 5.2(b) above is less than such Minimum Rate of Interest, the Rate of Interest for such Interest Period shall be such Minimum Rate of Interest.

If the applicable Pricing Supplement specifies a Maximum Rate of Interest for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of Condition 5.2(b) above is greater than such Maximum Rate of Interest, the Rate of Interest for such Interest Period shall be such Maximum Rate of Interest.

Whether or not a Minimum Rate of Interest or Maximum Rate of Interest is specified in the relevant Pricing Supplement, in no event shall the Rate of Interest (including any applicable Margin) be less than zero.

(d) Determination of Rate of Interest and Calculation of Interest Amounts

The Principal Paying Agent, in the case of Floating Rate Notes, and the Calculation Agent, in the case of Index Linked Interest Notes, will at or as soon as practicable after each time at which the Rate of Interest is to be determined, determine the Rate of Interest for the relevant Interest Period. In the case of Index Linked Interest Notes, the Calculation Agent will notify the Principal Paying Agent of the Rate of Interest for the relevant Interest Period as soon as practicable after calculating the same.

The Principal Paying Agent will calculate the amount of interest (the "Interest Amount") payable on the Floating Rate Notes or Index Linked Interest Notes for the relevant Interest Period by applying the Rate of Interest to:

(A) in the case of Floating Rate Notes or Index Linked Interest Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or

(B) in the case of Floating Rate Notes or Index Linked Interest Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Floating Rate Note or an Index Linked Interest Note in definitive form is a multiple of the Calculation Amount, the Interest Amount payable in respect of such Note shall be the product of the amount (determined in the manner provided above) for the Calculation Amount and the amount by which the Calculation Amount is multiplied to reach the Specified Denomination without any further rounding.

(e) *Benchmark Replacement (SOFR): The following provisions shall apply if Benchmark Replacement (SOFR) is specified in the applicable Pricing Supplement:*

(A) Benchmark Replacement

If the Issuer or its designee determines on or prior to the relevant Reference Time that a Benchmark Event and its related Benchmark Replacement Date have occurred with respect to the-then current Benchmark, the Benchmark Replacement will replace the then-current Benchmark for all purposes relating to the Notes in respect of all determinations on such date and for all determinations on all subsequent dates.

(B) Benchmark Replacement Conforming Changes

In connection with the implementation of a Benchmark Replacement, the Issuer or its designee will have the right to make Benchmark Replacement Conforming Changes from time to time. For the avoidance of doubt, any of the Agents shall, at the direction and expense of the Issuer, effect such consequential amendments to the Agency Agreement and these Conditions as may be required to give effect to this Condition 5.2(e). Noteholders' consent shall not be required in connection with effecting any such changes, including the execution of any documents or any steps to be taken by the Agents (if required). Further, none of the Calculation Agent, the Paying Agents, the Registrars or the Transfer Agents shall be responsible or liable for any determinations, decisions or elections made by the Issuer or its designee with respect to any Benchmark Replacement or any other changes and shall be entitled to rely conclusively on any certifications provided to each of them in this regard.

(C) Decisions and Determinations

Any determination, decision or election that may be made by the Issuer or its designee pursuant to this Condition 5.2(e), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection (i) will be conclusive and binding absent manifest error, (ii) will be made in the sole discretion of the Issuer or its designee, as applicable, and (iii) notwithstanding anything to the contrary in the documentation relating to the Notes, shall become effective without consent from the holders of the Notes or any other party.

(D) Certain Defined Terms: As used in this Condition 5.2(e):

"**Benchmark**" means, initially, the relevant SOFR Benchmark specified in the applicable Pricing Supplement; provided that if the Issuer or its designee determines on or prior to the Reference Time that a Benchmark Event and its related Benchmark Replacement Date have occurred with respect to the relevant SOFR Benchmark (including any daily published component used in the calculation thereof) or the then-current Benchmark, then "**Benchmark**" means the applicable Benchmark Replacement;

"**Benchmark Event**" means the occurrence of one or more of the following events with respect to the then-current Benchmark (including any daily published component used in the calculation thereof):

(i) a public statement or publication of information by or on behalf of the administrator of the Benchmark (or such component) announcing that such administrator has ceased or will cease to provide the Benchmark (or such component), permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark (or such component); or

(ii) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark (or such component), the central bank for the currency of the Benchmark (or such component), an insolvency official with jurisdiction over the administrator for the Benchmark (or such component), a resolution authority with jurisdiction over the administrator for the Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark, which states that the administrator of the Benchmark (or such component) has ceased or will cease to provide the Benchmark (or such component) permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark (or such component); or

(iii) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark announcing that the Benchmark is no longer representative;

"**Benchmark Replacement**" means the first alternative set forth in the order below that can be determined by the Issuer or its designee as of the Benchmark Replacement Date:

(i) the sum of:

  (1) the alternate reference rate that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark (including any daily published component used in the calculation thereof); and

  (2) the Benchmark Replacement Adjustment;

(ii) the sum of:

  (1) the ISDA Fallback Rate; and

  (2) the Benchmark Replacement Adjustment; or

(iii) the sum of:

(1) the alternate reference rate that has been selected by the Issuer or its designee as the replacement for the then-current Benchmark (including any daily published component used in the calculation thereof) giving due consideration to any industry-accepted reference rate as a replacement for the then-current Benchmark (including any daily published component used in the calculation thereof) for U.S. dollar-denominated Floating Rate Notes at such time; and

(2) the Benchmark Replacement Adjustment;

"**Benchmark Replacement Adjustment**" means the first alternative set forth in the order below that can be determined by the Issuer or its designee as of the Benchmark Replacement Date:

(i) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;

(ii) if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, the ISDA Fallback Adjustment; or

(iii) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the Issuer or its designee giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current Benchmark (including any daily published component used in the calculation thereof) with the applicable Unadjusted Benchmark Replacement for U.S. dollar-denominated Floating Rate Notes at such time;

"**Benchmark Replacement Conforming Changes**" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the timing and frequency of determining rates and making payments of interest, rounding of amounts or tenors, and other administrative matters) the Issuer or its designee decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the Issuer or its designee decides that adoption of any portion of such market practice is not administratively feasible or if the Issuer or its designee determine that no market practice for use of the Benchmark Replacement exists, in such other manner as the Issuer or its designee determines is reasonably necessary);

"**Benchmark Replacement Date**" means the earliest to occur of the following events with respect to the then-current Benchmark (including any daily published component used in the calculation thereof):

(i) in the case of sub-paragraph (i) or (ii) of the definition of "Benchmark Event", the later of:

(1) the date of the public statement or publication of information referenced therein; and

(2) the date on which the administrator of the Benchmark permanently or indefinitely ceases to provide the Benchmark (or such component); or

(ii) in the case of sub-paragraph (iii) of the definition of "Benchmark Event", the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination;

"**designee**" means a designee as selected and separately appointed by the Issuer in writing;

"**ISDA Definitions**" means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time;

"**ISDA Fallback Adjustment**" means the spread adjustment (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA Definitions to be determined upon the occurrence of an index cessation event with respect to the Benchmark;

"**ISDA Fallback Rate**" means the rate that would apply for derivatives transactions referencing the ISDA Definitions to be effective upon the occurrence of an index cessation date with respect to the Benchmark (including any daily published component used in the calculation thereof) for the applicable tenor excluding the applicable ISDA Fallback Adjustment;

"**Reference Time**" with respect to any determination of the Benchmark means (1) if the Benchmark is the SOFR Benchmark, the SOFR Determination Time (where Simple SOFR Average or Compounded Daily SOFR is specified as applicable hereon) or SOFR Index Determination Time (where SOFR Index is specified as applicable hereon), or (2) if the Benchmark is not the SOFR Benchmark, the time determined by the Issuer or its designee after giving effect to the Benchmark Replacement Conforming Changes;

"**Relevant Governmental Body**" means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto; and

"**Unadjusted Benchmark Replacement**" means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

In these Terms and Conditions,

"**Day Count Fraction**" means, in respect of the calculation of an amount of interest in accordance with this Condition 5.2:

(i) if "**Actual/Actual (ISDA)**" or "**Actual/Actual**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 (or, if any portion of that Interest Period falls in a leap year, the sum of (I) the actual number of days in that portion of the Interest Period falling in a leap year divided by 366 and (II) the actual number of days in that portion of the Interest Period falling in a non-leap year divided by 365);

(ii) if "**Actual/365 (Fixed)**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365;

(iii) if "**Actual/365 (Sterling)**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365, or in the case of an Interest Payment Date falling in a leap year, 366;

(iv) if "**Actual/360**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 360;

(v) if "**30/360**," "**360/36**0" or "**Bond Basis**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times Y_2 - Y_1] + [30 \times M_2 - M_1] + (D_2 - D_1)}{360}$$

where:

"$\mathbf{Y_1}$" is the year, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{Y_2}$" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{M_1}$" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{M_2}$" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{D_1}$" is the first calendar day, expressed as a number, of the Interest Period, unless such number is 31, in which case D1 will be 30; and

"$\mathbf{D_2}$" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31 and D1 is greater than 29, in which case D_2 will be 30;

(vi) if "**30E/360**" or "**Eurobond Basis**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"$\mathbf{Y_1}$" is the year, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{Y_2}$" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{M_1}$" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{M_2}$" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{D_1}$" is the first calendar day, expressed as a number, of the Interest Period, unless such number would be 31, in which case D1 will be 30; and

"$\mathbf{D_2}$" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31, in which case D2 will be 30; and

(vii) if "**30E/360 (ISDA)**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"$\mathbf{Y_1}$" is the year, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{Y_2}$" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{M_1}$" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{M_2}$" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{D_1}$" is the first calendar day, expressed as a number, of the Interest Period, unless (i) that day is the last day of February or (ii) such number would be 31, in which case D1 will be 30; and

"$\mathbf{D_2}$" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless (i) that day is the last day of February but not the Maturity Date or (ii) such number would be 31, in which case D2 will be 30.

(f) *Notification of Rate of Interest and Interest Amounts*

The Principal Paying Agent will cause the Rate of Interest and each Interest Amount for each Interest Period and the relevant Interest Payment Date to be notified to the Issuer and any stock exchange on which the relevant Floating Rate Notes or Index Linked Interest Notes are for the time being listed and notice thereof to be published in accordance with Condition 14 (*Notices*) as soon as possible after their determination but in no event later than the fourth London Business Day thereafter. Each Interest Amount and Interest Payment Date so notified may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without prior notice in the event of an extension or shortening of the Interest Period. Any such amendment will be promptly notified to the Issuer and each stock exchange on which the relevant Floating Rate Notes or Index Linked Interest Notes are for the time being listed and to the Noteholders in accordance with Condition 14 (*Notices*). For the purposes of this paragraph, the expression "London Business Day" means a day (other than a Saturday or a Sunday) on which banks and foreign exchange markets are open for general business in London.

(g) *Certificates to be Final*

All certificates, communications, opinions, determinations, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 5.2 (*Interest – Interest on Floating Rate Notes and Index Linked Interest Notes*), whether by the Principal Paying Agent or, if applicable, the Calculation Agent, shall (in the absence of willful default, bad faith or manifest error) be binding on the Issuer, the Principal Paying Agent, the Registrar, the Calculation Agent (if applicable), the other Paying Agents and all Noteholders, Receiptholders and Couponholders and (in the absence as aforesaid) no liability to the Issuer, the Noteholders, the Receiptholders or the Couponholders shall attach to the Principal Paying Agent or the Calculation Agent (if applicable) in connection with the exercise or non-exercise by it of its powers, duties and discretions pursuant to such provisions.

5.3 Interest on Dual Currency Notes

In the case of Dual Currency Notes, if the rate or amount of interest falls to be determined by reference to an exchange rate, the rate or amount of interest payable shall be determined in the manner specified in the applicable Pricing Supplement.

5.4 Interest on Partly Paid Notes

In the case of Partly Paid Notes (other than Partly Paid Notes which are Zero Coupon Notes), interest will accrue as aforesaid on the paid-up nominal amount of such Notes and otherwise as specified in the applicable Pricing Supplement.

5.5 Accrual of Interest

Each Note (or in the case of the redemption of part only of a Note, that part only of such Note) will cease to bear interest (if any) from the date for its redemption unless, upon due presentation thereof, payment of principal is improperly withheld or refused. In such event, interest will continue to accrue until whichever is the earlier of:

(a) the date on which all amounts due in respect of such Note have been paid; and

(b) the date on which the full amount of the moneys payable has been received by the Principal Paying Agent or the Registrar, as the case may be, and notice to that effect has been given in accordance with Condition 14 (*Notices*).

6 Payments

6.1 Method of Payment

Subject as provided below:

(a) payments in a Specified Currency other than Euro will be made by credit or transfer to an account in the relevant Specified Currency maintained by the payee with, or, at the option of the payee, by a check in such Specified Currency drawn on, a bank in the principal financial center of the country of such Specified Currency (which, if the Specified Currency is Australian dollars or New Zealand dollars, shall be Melbourne or Wellington, respectively); and

(b) payments in Euro will be made by credit or transfer to a Euro account (or any other account to which Euro may be credited or transferred) specified by the payee or, at the option of the payee, by a Euro check.

Payments will be subject in all cases to any fiscal or other laws and regulations applicable thereto in the place of payment, but without prejudice to the provisions of Condition 8 (*Taxation*). References to "Specified Currency" will include any successor currency under applicable law.

6.2 Presentation of Definitive Bearer Notes, Receipts and Coupons

Payments of principal in respect of Definitive Bearer Notes will (subject as provided below) be made in the manner provided in Condition 6.1 above only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of definitive Bearer Notes, and payments of interest in respect of definitive Bearer Notes will (subject as provided below) be made as aforesaid only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of Coupons, in each case at the specified office of any Paying Agent outside the United States (which expression, as used herein, means the United States of America (including the States and the District of Columbia, its territories, its possessions and other areas subject to its jurisdiction)).

In respect of Definitive Bearer Notes, payments of installments of principal (if any), other than the final installment, will (subject as provided below) be made in the manner provided in Condition 6.1 above against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the relevant Receipt in accordance with the preceding paragraph. Payment of the final installment will be made in the manner provided in Condition 6.1 above only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the relevant Bearer Note in accordance with the preceding paragraph. Each Receipt must be presented for payment of the relevant installment together with the definitive Bearer Note to which it appertains. Receipts presented without the definitive Bearer Note to which they appertain do not constitute valid obligations of the Issuer. Upon the date on which any Definitive Bearer Note becomes due and repayable, unmatured Receipts (if any) relating thereto (whether or not attached) shall become void and no payment shall be made in respect thereof.

Fixed Rate Notes in definitive bearer form (other than Dual Currency Notes, Index Linked Notes or Long Maturity Notes (as defined below) should be presented for payment together with all unmatured Coupons appertaining thereto (which expression shall for this purpose include Coupons falling to be issued on exchange of matured Talons), failing which the amount of any missing unmatured Coupon (or, in the case of payment not being made in full, the same proportion of the amount of such missing unmatured Coupon as the sum so paid bears to the sum due) will be deducted from the sum due for payment. Each amount of principal so deducted will be paid in the manner mentioned above against surrender of the relative missing Coupon at any time before the expiry of 10 years after the Relevant Date (as defined in Condition 8 (*Taxation*)) in respect of such principal (whether or not such Coupon would otherwise have become void under Condition 9 (*Prescription*)) or, if later, five years from the date on which such Coupon would otherwise have become due, but in no event thereafter.

Upon any Fixed Rate Note in definitive bearer form becoming due and repayable prior to its Maturity Date, all unmatured Talons (if any) appertaining thereto will become void and no further Coupons will be issued in respect thereof.

Upon the date on which any Floating Rate Note, Dual Currency Note or Index Linked Note or Long Maturity Note in definitive bearer form becomes due and repayable, unmatured Coupons and Talons (if any) relating thereto (whether or not attached) shall become void and no payment or, as the case may be, exchange for further Coupons shall be made in respect thereof. A "Long Maturity Note" is a Fixed Rate Note (other than a Fixed Rate Note which on issue had a Talon attached) whose nominal amount on issue is less than the aggregate interest payable thereon provided that such Note shall cease to be a Long Maturity Note on the Interest Payment Date on which the aggregate amount of interest remaining to be paid after that date is less than the nominal amount of such Note.

If the due date for redemption of any definitive Bearer Note is not an Interest Payment Date, interest (if any) accrued in respect of such Note from (and including) the preceding Interest Payment Date or, as the case may be, the Interest Commencement Date shall be payable only against surrender of the relevant definitive Bearer Note.

6.3 *Payments in respect of Bearer Global Notes*

Payments of principal and interest (if any) in respect of Notes represented by any Global Note in bearer form will (subject as provided below) be made in the manner provided in Condition 6.1 above and otherwise in the manner specified in the relevant Global Note against presentation or surrender, as the case may be, of such Global Note at the specified office of any Paying Agent outside the United States. A record of each payment made against presentation or surrender of any Global Note in bearer form, distinguishing between any payment of principal and any payment of interest, will be made on such Global Note by the Paying Agent to which it was presented and such record shall be prima facie evidence that the payment in question has been made.

6.4 *Payments in respect of Registered Notes*

Payments of principal (other than installments of principal (if any) prior to the final installment) in respect of each Registered Note (whether in definitive or global form) will be made against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the Registered Note at the specified office of the Registrar or any of the Paying

Agents. Such payments will be made by transfer to the Designated Account (as defined below) of the holder (or the first named of joint holders) of the Registered Note appearing in the register of holders of the Registered Notes maintained by the Registrar (the "Register") at the close of business on the business day (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar is located) immediately prior to the relevant payment date. Notwithstanding the previous sentence, if (a) a holder does not have a Designated Account or (b) the principal amount of the Notes held by a holder is less than US$250,000 (or its approximate equivalent in any other Specified Currency), payment will instead be made by a check in the Specified Currency drawn on a Designated Bank (as defined below). For these purposes, "Designated Account" means the account maintained by a holder with a Designated Bank and identified as such in the Register and "Designated Bank" means (in the case of payment in a Specified Currency other than Euro) a bank in the principal financial center of the country of such Specified Currency (which, if the Specified Currency is Australian dollars or New Zealand dollars, shall be Melbourne or Wellington, respectively) and (in the case of a payment in Euro) any bank which processes payments in Euro.

Payments of interest due on a Registered Note (whether in definitive or global form) and payments of installments of principal (if any) due on a Registered Note (other than the final installment) will be made by a check in the Specified Currency drawn on a Designated Bank and mailed by uninsured mail on the business day in the city where the specified office of the Registrar is located immediately preceding the relevant due date to the holder (or the first named of joint holders) of the Registered Note appearing in the Register at the close of business on the day on which DTC, Euroclear and/or Clearstream, as applicable to the extent such Registered Note is cleared and settled through such facility, is open for business, immediately preceding the relevant due date (the "Record Date") at his address shown in the Register on the Record Date and at his risk. Upon application of the holder to the specified office of the Registrar not less than three business days in the city where the specified office of the Registrar is located before the due date for any payment of interest in respect of a Registered Note, the payment may be made by transfer on the due date in the manner provided in the preceding paragraph. Any such application for transfer shall be deemed to relate to all future payments of interest (other than interest due on redemption) and installments of principal (other than the final installment) in respect of the Registered Notes which become payable to the holder who has made the initial application until such time as the Registrar is notified in writing to the contrary by such holder. Payment of the interest due in respect of each Registered Note on redemption and the final installment of principal will be made in the same manner as payment of the principal amount of such Registered Note.

Holders of Registered Notes will not be entitled to any interest or other payment for any delay in receiving any amount due in respect of any Registered Note as a result of a check posted in accordance with this Condition arriving after the due date for payment or being lost in the post. No commissions or expenses shall be charged to such holders by the Registrar in respect of any payments of principal or interest in respect of the Registered Notes.

All amounts payable to DTC or its nominee as registered holder of a Registered Global Note in respect of Notes denominated in a Specified Currency other than U.S. dollars shall be paid by transfer by the Registrar to an account in the relevant Specified Currency of the Exchange Agent on behalf of DTC or its nominee for payment in such Specified Currency or conversion into and payment in U.S. dollars in accordance with the provisions of the Agency Agreement.

None of the Issuer or the Agents will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

6.5 General provisions applicable to payments

The holder of a Global Note shall be the only person entitled to receive payments in respect of Notes represented by such Global Note and the Issuer will be discharged by payment to, or to the order of, the holder of such Global Note in respect of each amount so paid. Each of the persons shown in the records of Euroclear, Clearstream or DTC as the beneficial holder of a particular nominal amount of Notes represented by such Global Note must look solely to Euroclear, Clearstream or DTC, as the case may be, for his share of each payment so made by the Issuer to, or to the order of, the holder of such Global Note. No person other than the holder of such Global Note shall have any claim against the Issuer in respect of any payments due on such Global Note.

Notwithstanding the foregoing provisions of this Condition, if any amount of principal and/or interest in respect of any Bearer Notes is payable in U.S. dollars, such U.S. dollar payments of principal and/or interest in respect of such Bearer Notes will be made at the specified office of a Paying Agent in the United States if:

(a) the Issuer has appointed Paying Agents with specified offices outside the United States with the reasonable expectation that such Paying Agents would be able to make payment in U.S. dollars at such specified offices outside the United States of the full amount of principal and interest on the Bearer Notes in the manner provided above when due;

(b) payment of the full amount of such principal and interest at all such specified offices outside the United States is illegal or effectively precluded by exchange controls or other similar restrictions on the full payment or receipt of principal and interest in U.S. dollars; and

(c) such payment is then permitted under United States law without involving, in the opinion of the Issuer, adverse tax consequences to the Issuer.

6.6 Payment Day

If the date for payment of any amount in respect of any Note, Receipt or Coupon is not a Payment Day, the holder thereof shall not be entitled to payment until the next following Payment Day in the relevant place and shall not be entitled to further interest or other payment in respect of such delay. For these purposes, "Payment Day" means any day which (subject to Condition 9 (*Prescription*)) is:

(a) a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in:

  (i) in the case of Notes in definitive form only, the relevant place of presentation;

  (ii) each Additional Financial Center specified in the applicable Pricing Supplement; and

(b) either (A) in relation to any sum payable in a Specified Currency other than Euro, a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the principal financial center of the country of the relevant Specified Currency (if other than the place of presentation, London and any Additional Financial Center and which if the Specified Currency is Australian dollars or New Zealand dollars shall be Melbourne or Wellington, respectively) or (B) in relation to any sum payable in Euro, a day on which the TARGET2 System is open; and

(c) in the case of any payment in respect of a Registered Global Note denominated in a Specified Currency other than U.S. dollars and registered in the name of DTC or its nominee and in respect of which an accountholder of DTC (with an interest in such Registered Global Note) has elected to receive any part of such payment in U.S. dollars, a day on which commercial banks are not authorized or required by law or regulation to be closed in the City of New York.

6.7 Interpretation of Principal and Interest

Any reference in these Conditions to principal in respect of the Notes shall be deemed to include, as applicable:

(a) any additional amounts which may be payable with respect to principal under Condition 8 (*Taxation*);

(b) the Final Redemption Amount of the Notes;

(c) the Early Redemption Amount of the Notes;

(d) the Optional Redemption Amount(s) (if any) of the Notes;

(e) in relation to Notes redeemable in installments, the Installment Amounts;

(f) in relation to Zero Coupon Notes, the Amortized Face Amount (as defined in Condition 7.7 (*Redemption and Purchase – Early Redemption Amount*)); and

(g) any premium and any other amounts (other than interest) which may be payable by the Issuer under or in respect of the Notes.

Any reference in these Conditions to interest in respect of the Notes shall be deemed to include, as applicable, any additional amounts which may be payable with respect to interest under Condition 8 (*Taxation*).

7 Redemption and Purchase

7.1 Redemption at Maturity

Unless previously redeemed or purchased and canceled as specified below, each Note (including each Dual Currency Redemption Note) will be redeemed by the Issuer at its Final Redemption Amount specified in, or determined in the manner specified in, the applicable Pricing Supplement in the relevant Specified Currency on the Maturity Date.

7.2 Redemption for Tax Reasons

The Notes may be redeemed at the option of the Issuer in whole, but not in part, at any time (if this Note is neither a Floating Rate Note, an Index Linked Interest Note or a Dual Currency Interest Note) or on any Interest Payment Date (if this Note is either a Floating Rate Note, an Index Linked Interest Note or a Dual Currency Interest Note), on giving not less than 30 nor more than 60 days' notice to the Principal Paying Agent and, in accordance with Condition 14 (*Notices*), the Noteholders (which notice shall be irrevocable), if:

(a) on the occasion of the next payment due under the Notes, the Issuer has or will become obliged to pay additional amounts as provided or referred to in Condition 8 (*Taxation*) as a result of any change in, or amendment to, the laws of Korea or any political subdivision or any authority thereof or therein having power to tax, or any regulations or rulings promulgated thereunder, or any change in the application or official interpretation of such laws or regulations or rulings, or any change in the application or official interpretation of, or any execution of or amendment to, any treaty or treaties affecting taxation to which Korea is a party, which (including the cessation of tax exemptions presently applicable) change or amendment becomes effective on or after the date on which agreement is reached to issue the first Tranche of the Notes; and

(b) such obligation cannot be avoided by the Issuer taking reasonable measures available to it,

provided that no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which the Issuer would be obliged to pay such additional amounts were a payment in respect of the Notes then due. Prior to the publication of any notice of redemption pursuant to this Condition, the Issuer shall deliver to the Principal Paying Agent a certificate signed by two duly authorized officers of the Issuer stating that the Issuer is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of the Issuer so to redeem have occurred, and an opinion of independent legal advisers of recognized standing to the effect that the Issuer has or will become obliged to pay such additional amounts as a result of such change or amendment.

Notes redeemed pursuant to this Condition 7.2 will be redeemed at their Early Redemption Amount referred to in Condition 7.7 below together (if appropriate) with interest accrued to (but excluding) the date of redemption.

7.3 Redemption at the Option of the Issuer ("Issuer Call")

If Issuer Call is specified in the applicable Pricing Supplement, the Issuer may, having given:

(a) not less than 15 nor more than 30 days' notice to the Noteholders in accordance with Condition 14 (*Notices*); and

(b) not less than 15 days before the giving of the notice referred to in (a), notice to the Principal Paying Agent and, in the case of a redemption of Registered Notes, the Registrar;

(which notices shall be irrevocable and shall specify the date fixed for redemption), redeem all or some only of the Notes then outstanding on any Optional Redemption Date and at the Optional Redemption Amount(s) specified in, or determined in the manner specified in, the applicable Pricing Supplement together, if appropriate, with interest accrued to (but excluding) the relevant Optional Redemption Date. Any such redemption must be of a nominal amount not less than the Minimum Redemption Amount and not more than the Maximum Redemption Amount in each case as may be specified in the applicable Pricing Supplement. In the case of a partial redemption of Notes, the Notes to be redeemed ("Redeemed Notes") will be selected individually by lot, in the case of Redeemed Notes represented by definitive Notes, and in accordance with the rules of Euroclear and/or Clearstream and/or, as the case may be, DTC, in the case of Redeemed Notes represented by a Global Note, not more than 30 days prior to the date fixed for redemption (such date of selection being hereinafter called the "Selection Date"). In the case of Redeemed Notes represented by definitive Notes, a list of the serial numbers of such Redeemed Notes will be published in accordance with Condition 14 (*Notices*) not less than 15 days prior to the date fixed for redemption. The aggregate nominal amount of Redeemed Notes represented by definitive Notes shall bear the same proportion to the aggregate nominal amount of all Redeemed Notes as the aggregate nominal amount of definitive Notes outstanding bears to the aggregate nominal amount of the Notes outstanding, in each case on the Selection Date, provided that such first mentioned nominal amount shall, if necessary, be rounded downwards to the nearest integral multiple of the Specified Denomination, and the aggregate nominal amount of Redeemed Notes represented by a Global Note shall be equal to the balance of the Redeemed Notes. No exchange of the relevant Global Note will be permitted during the period from (and including) the Selection Date to (and including) the date fixed for redemption pursuant to this Condition 7.3 and notice to that effect shall be given by the Issuer to the Noteholders in accordance with Condition 14 (*Notices*) at least five days prior to the Selection Date.

7.4 *Redemption at the Option of the Noteholders ("Investor Put")*

If Investor Put is specified in the applicable Pricing Supplement, upon the holder of any Note giving to the Issuer in accordance with Condition 14 (*Notices*) not less than 15 nor more than 30 days' notice or such other period of notice as is specified in the applicable Pricing Supplement the Issuer will, upon the expiry of such notice, redeem, subject to, and in accordance with, the terms specified in the applicable Pricing Supplement, in whole (but not in part), such Note on the Optional Redemption Date and at the Optional Redemption Amount specified in, or determined in the manner specified in, the applicable Pricing Supplement together, if appropriate, with interest accrued to (but excluding) the Optional Redemption Date. Registered Notes may be redeemed under this Condition 7.4 in any multiple of their lowest Specified Denomination.

7.5 *Change of Control Redemption*

Upon the occurrence of a Change of Control, each Noteholder will have the option (the "Change of Control Put Option") (unless, prior to the giving of the Change of Control Put Event Notice (as defined below), the Issuer shall have given notice under Condition 7.2 or 7.3 in respect of the relevant Notes), exercisable during the Change of Control Put Period, to require the Issuer to redeem all or any part of its Notes at a redemption price (the "Change of Control Redemption Price") equal to 100% of the nominal amount of such Notes, together with accrued and unpaid interest, if any, to but excluding the Change of Control Put Date (as defined below). The Change of Control Put Option shall operate as set out in Condition 7.6. Accrued and unpaid interest in respect of the then current Interest Period (or portion thereof) shall be determined as if the Change of Control Put Date was an Interest Payment Date. Within 30 days following a Change of Control, the Issuer shall give notice (a "Change of Control Put Event Notice") to the Noteholders in accordance with Condition 14 (*Notices*) stating (a) that a Change of Control has occurred and that such holder has the right to require the Issuer to redeem such holder's Notes at the Change of Control Redemption Price, (b) the date (the "Change of Control Put Date") fixed by the Issuer for redemption under this Condition 7.5 (which shall be the fourteenth day after the expiry of the Change of Control Put Period) and (c) the procedures determined by the Issuer that a Noteholder must follow in order to have its Notes redeemed.

In this Condition:

"Change of Control" means Korea ceasing to own and control (directly or indirectly or in combination) at least 51% of the issued and outstanding capital stock of the Issuer.

"Change of Control Put Period" means the period of 60 days after a Change of Control Put Event Notice is given.

7.6 Put Notices

To exercise the right to require redemption of this Note pursuant to Condition 7.4 or 7.5, the holder of this Note must deliver such Note at the specified office of any Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes) at any time during normal business hours of such Paying Agent or, as the case may be, the Registrar falling within the notice period (in the case of Condition 7.4) or the Change of Control Put Period (in the case of Condition 7.5), accompanied by a duly completed and signed notice of exercise in the form (for the time being current) obtainable from any specified office of any Paying Agent or, as the case may be, the Registrar (a "Put Notice") and in which the holder must specify a bank account (or, if payment is by check, an address) to which payment is to be made under this Condition and, in the case of Registered Notes, the nominal amount thereof to be redeemed and, if less than the full nominal amount of the Registered Notes so surrendered is to be redeemed, an address to which a new Registered Note in respect of the balance of such Registered Notes is to be sent subject to and in accordance with the provisions of Condition 2.2 (*Transfers of Registered Notes – Transfers of Registered Notes in definitive form*). If this Note is in definitive form, the Put Notice must be accompanied by this Note or evidence satisfactory to the relevant Paying Agent that this Note will, following delivery of the Put Notice, be held to its order or under its control.

Any Put Notice given by a holder of any Note pursuant to this paragraph shall be irrevocable except where prior to the due date of redemption an Event of Default shall have occurred and be continuing in which event such holder, at its option, may elect by notice to the Issuer to withdraw the notice given pursuant to this paragraph and instead to declare such Note forthwith due and payable pursuant to Condition 10 (*Events of Default*).

Each Note should be presented for redemption together with all unmatured Coupons relating to it, failing which such Note will be redeemed only against provision of such indemnity as the Issuer may require. Upon the date on which any Note falls due for redemption or is purchased for cancelation, all unmatured Coupons appertaining thereto will become void and no payment will thereafter be made in respect thereto.

7.7 Early Redemption Amounts

For the purpose of Condition 7.2 above and Condition 10 (*Events of Default*), the Notes will be redeemed at the Early Redemption Amount calculated as follows:

(a) in the case of a Note with a Final Redemption Amount equal to the Issue Price, at the Final Redemption Amount thereof;

(b) in the case of a Note (other than a Zero Coupon Note but including an Installment Note and a Partly Paid Note) with a Final Redemption Amount which is or may be less or greater than the Issue Price or which is payable in a Specified Currency other than that in which the Note is denominated, at the amount specified in, or determined in the manner specified in, the applicable Pricing Supplement or, if no such amount or manner is so specified in the Pricing Supplement, at its nominal amount; or

(c) in the case of a Zero Coupon Note, at an amount (the "Amortized Face Amount") calculated in accordance with the following formula:

$$\text{Early Redemption Amount} = RP \times (1 + AY)y$$

where:

"RP" means the Reference Price; and

"AY" means the Accrual Yield expressed as a decimal; and

"y" is a fraction the numerator of which is equal to the number of days (calculated on the basis of a 360-day year consisting of 12 months of 30 days each) from (and including) the Issue Date of the first Tranche of the Notes to (but excluding) the date fixed for redemption or (as the case may be) the date upon which such Note becomes due and repayable and the denominator of which is 360,

or on such other calculation basis as may be specified in the applicable Pricing Supplement.

7.8 Installments

Installment Notes will be redeemed in the Installment Amounts and on the Installment Dates. In the case of early redemption, the Early Redemption Amount will be determined pursuant to Condition 7.7 above.

7.9 Partly Paid Notes

Partly Paid Notes will be redeemed, whether at maturity, early redemption or otherwise, in accordance with the provisions of this Condition and the applicable Pricing Supplement.

7.10 Purchases

The Issuer or any Subsidiary of the Issuer may at any time purchase Notes at any price (provided that, in the case of Bearer Notes in definitive form, these are purchased together with all unmatured Receipts, Coupons and Talons appertaining thereto) in the open market or otherwise. Such Notes may be held, reissued, resold or, at the option of the Issuer, surrendered to any Paying Agent and/or the Registrar for cancelation.

7.11 Cancelation

All Notes which are redeemed will forthwith be canceled (together with all unmatured Receipts, Coupons and Talons attached thereto or surrendered therewith at the time of redemption). All Notes so canceled and the Notes purchased and canceled pursuant to Condition 7.10 above (together with all unmatured Receipts and Coupons and Talons canceled therewith) shall be forwarded to the Principal Paying Agent (which shall notify the Registrar of such canceled Notes in the case of Registered Notes) and cannot be reissued or resold.

7.12 Late payment on Zero Coupon Notes

If the amount payable in respect of any Zero Coupon Note upon redemption of such Zero Coupon Note pursuant to Condition 7.1, 7.2, 7.3, 7.4 or 7.5 above or upon its becoming due and repayable as provided in Condition 10 (*Events of Default*) is improperly withheld or refused, the amount due and repayable in respect of such Zero Coupon Note shall be the amount calculated as provided in Condition 7.7(c) above as though the references therein to the date fixed for the redemption or the date upon which such Zero Coupon Note becomes due and payable were replaced by references to the date which is the earlier of:

(a) the date on which all amounts due in respect of such Zero Coupon Note have been paid; and

(b) the date on which the full amount of the moneys payable has been received by the Principal Paying Agent or, as the case may be, the Registrar and notice to that effect has been given to the Noteholders in accordance with Condition 14 (*Notices*).

7.13 Obligation to redeem

Upon the expiry of any notice as is referred to in Condition 7.2, 7.3, 7.4 or 7.5 above, the Issuer shall be bound to redeem the Notes to which the notice referred at the relevant redemption price applicable at the date of such redemption together with, if appropriate, interest accrued to (but excluding) the relevant redemption date.

8 Taxation

All payments of principal and interest in respect of the Notes, Receipts and Coupons by the Issuer will be made without withholding or deduction for or on account of any present or future taxes or duties of whatever nature imposed or levied by or on behalf of Korea or any political subdivision or any authority thereof or therein having power to tax unless such withholding or deduction is required by law. In such event, the Issuer will pay such additional amounts as shall be necessary in order that the net amounts received by the holders of the Notes, Receipts or Coupons after such withholding or deduction shall equal the respective amounts of principal and interest which would otherwise have been receivable in respect of the Notes, Receipts or Coupons, as the case may be, in the absence of such withholding or deduction ("Additional Amounts"); except that no such Additional Amounts shall be payable with respect to any Note, Receipt or Coupon:

(a) presented for payment (where presentation is required) in Korea (provided the Notes can also be presented at an office of a Paying Agent outside Korea); or

(b) where such withholding or deduction is imposed on a payment to a holder who is liable for such taxes or duties in respect of such Note, Receipt or Coupon by reason of his having some connection with Korea or any political subdivision or any authority thereof or therein other than the mere holding of such Note, Receipt or Coupon; or

(c) presented for payment more than 30 days after the Relevant Date (as defined below) except to the extent that the holder thereof would have been entitled to an Additional Amount on presenting the same for payment on such 30th day; or

(d) where such withholding or deduction is imposed in connection with Sections 1471-1474 of the U.S. Internal Revenue Code and U.S. Treasury regulations thereunder ("FATCA"), any intergovernmental agreement between the United States and any other jurisdiction implementing or relating to FATCA or any non-U.S. law, regulation or guidance enacted or issued with respect thereto; or

(e) presented for payment by or on behalf of a holder who would be able to avoid such withholding or deduction by presenting the relevant Note, Receipt or Coupon to another Paying Agent in a Member State of the European Union; or

(f) where such withholding or deduction is imposed on a payment to a holder who would not be liable or subject to the withholding or deduction by making a declaration of non-residence or other similar claim for exemption to the relevant tax authority; or

(g) any combination of (a), (b), (c), (d), (e) or (f) above.

Nor will Additional Amounts be paid with respect to any payment on a Note, Receipt or Coupon to a holder who is a fiduciary, a partnership, a limited liability company or a holder other than the sole beneficial owner of that payment to the extent that payment would be required by the laws of Korea or any political subdivision or any authority thereof or therein to be included in the income, for tax purposes, of a beneficiary or settlor with respect to the fiduciary, a member of that partnership, an interest holder in a limited liability company or a beneficial owner who would not have been entitled to the Additional Amounts had that beneficiary, settlor, member or beneficial owner been the holder.

The obligation to pay Additional Amounts shall not apply to (a) any estate, inheritance, gift, sales, transfer, personal property or any similar tax, assessment or other governmental charge or (b) any tax, assessment or other governmental charge which is payable otherwise than by deduction or withholding from payments of principal of, or interest or premium on, the Notes, Receipts or Coupons.

Whenever there is mentioned in any context the payment of principal of, and any premium or interest on, any Note, Receipt or Coupon, such mention shall be deemed to include payment of Additional Amounts to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof.

As used herein, the "Relevant Date" means the date on which such payment first becomes due, except that, if the full amount of the moneys payable has not been duly received by the Principal Paying Agent or, as the case may be, the Registrar on or prior to such due date, it means the date on which notice to the effect that the full amount of such moneys having been so received is duly given to the Noteholders in accordance with Condition 14 (*Notices*).

9 Prescription

The Notes (whether in bearer or registered form), Receipts and Coupons will become void unless presented for payment within a period of 10 years (in the case of principal) and five years (in the case of interest) after the Relevant Date (as defined in Condition 8 (*Taxation*)) therefor.

There shall not be included in any Coupon sheet issued on exchange of a Talon any Coupon the claim for payment in respect of which would be void pursuant to this Condition or Condition 6.2 (*Payments – Presentation of Definitive Bearer Notes, Receipts and Coupons*) or any Talon which would be void pursuant to Condition 6.2 (*Payments – Presentation of Definitive Bearer Notes, Receipts and Coupons*).

10 Events of Default

If any of the following events (each an "Event of Default") occurs and is continuing:

(a) default in the payment of any installment of interest upon any of the Notes when due, and continuance of such default for a period of seven days; or

(b) default in the payment of all or any part of the principal of any of the Notes as and when the same shall become due and payable, whether at maturity, upon redemption or otherwise, and maintenance of such default for a period of seven days; or

(c) failure on the part of the Issuer duly to observe or perform any other of the covenants or agreements on the part of the Issuer under or in respect of the Notes for a period of 60 days after the date on which written notice specifying such failure, stating that such notice is a "Notice of Default" hereunder and demanding that the Issuer remedy the same, shall have been given by registered or certified mail, return receipt requested, to the Issuer by any Noteholder; or

(d) any Indebtedness of the Issuer in the aggregate outstanding nominal amount of US$10,000,000 (or its equivalent in one or more currencies) or more either (i) becoming due and payable by reason of acceleration thereof following default by the Issuer or (ii) not being repaid at, and remaining unpaid after, maturity as extended by the period of grace, if any, applicable thereto, or any guarantee given by the Issuer in respect of Indebtedness of any other Person not being honored (where the amount not honored is equal to US$10,000,000 (or its equivalent in one or more currencies) or more) when, and remaining dishonored after becoming, due and called; provided that, in the case of (i) above, if any such default under any such Indebtedness shall be cured or waived, then the default hereunder by reason thereof shall be deemed to have been cured and waived; or

(e) a court or administrative or other governmental agency or body having jurisdiction in the premises shall enter a decree or order for relief in respect of the Issuer in an involuntary case under any applicable bankruptcy, insolvency, reorganization, compulsory composition or other similar law now or hereafter in effect, or appointing a receiver, liquidator, assignee, custodian, trustee, sequestrator (or similar official) of the Issuer or for any substantial part of its properties or ordering the winding up, dissolution or liquidation of its affairs, or shall otherwise adjudicate or find the Issuer to be bankrupt or insolvent and in each case such decree, order, adjudication or finding shall remain unstayed and in effect for a period of 60 consecutive days; or

(f) the Issuer shall commence a voluntary case under any applicable bankruptcy, insolvency, reorganization, compulsory composition or other similar law now or hereafter in effect, or consent to the entry of an order for relief in an involuntary case under any such law, or consent to the appointment or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Issuer for any substantial part of its properties, or cease to carry on the whole or substantially the whole of its business or make any general assignment for the benefit of creditors, or enter into any composition with its creditors; or

(g) a secured party takes possession, or a receiver, manager or other similar officer is appointed, of the whole or any part of the undertaking, assets and revenues of the Issuer and such taking of possession or appointment is not stayed, terminated or discharged within 30 days; or

(h) any event occurs which under the laws of Korea has an analogous effect to any of the events referred to in sub-paragraphs (e) through (g) inclusive above;

then the holder of any Note may, by written notice addressed to the Issuer and delivered to the Issuer, declare such Note to be immediately due and payable whereupon it shall become immediately due and payable at its principal amount together with accrued interest without further action or formality unless such Event of Default shall have been remedied prior to receipt of such notice by the Issuer. Any such notice shall specify the serial number of each Note in respect of which it is given.

"Indebtedness" means any obligation whether present or future, or actual or contingent for the payment of repayment of money borrowed (including any guarantees or indemnities thereof) and/or interest thereon which is denominated in a currency other than the currency of the Republic and which has a final maturity of one year or more from its date of incurrence or issuance.

11 Replacement of Notes, Receipts, Coupons and Talons

Should any Note, Receipt, Coupon or Talon be lost, stolen, mutilated, defaced or destroyed, it may be replaced at the specified office of the Principal Paying Agent or the relevant Paying Agent (in the case of Bearer Notes, Receipts, Coupons and Talons) or of the Registrar (in the case of Registered Notes) upon payment by the claimant of such costs and expenses as may be incurred in connection therewith and on such terms as to evidence and indemnity as the Issuer may reasonably require. Mutilated or defaced Notes, Receipts, Coupons or Talons must be surrendered before replacements will be issued.

12 Principal Paying Agent, Registrar, Exchange Agent, Paying and Transfer Agents

The names of the initial Principal Paying Agent, the other initial Paying Agents, the initial Exchange Agent, the initial Registrar and the other initial Transfer Agents and their initial specified offices are set out below.

The Issuer is entitled to vary or terminate the appointment of any Paying Agent, Exchange Agent, Registrar or Transfer Agent and/or appoint additional or other Paying Agents, Registrars, Exchange Agents, or Transfer Agents and/or approve any change in the specified office through which any of the same acts, provided that:

(a) so long as the Notes are listed on any stock exchange, there will at all times be a Paying Agent (in the case of Bearer Notes), and a Registrar and Transfer Agent (in the case of Registered Notes) with a specified office (outside the United States in the case of Bearer Notes) in such place as may be required by the rules and regulations of the relevant stock exchange (or any other relevant authority);

(b) there will at all times be a Paying Agent, a Transfer Agent and a Registrar with a specified office in a city in continental Europe;

(c) so long as any of the Registered Global Notes payable in a Specified Currency other than U.S. dollars are held through DTC or its nominee, there will at all times be an Exchange Agent with a specified office in London;

(d) there will at all times be a Principal Paying Agent; and

(e) so long as the Notes are listed on the Singapore Exchange Securities Trading Limited (the "Singapore Stock Exchange") and the rules of the Singapore Stock Exchange so require, if the Global Note is exchanged for definitive Notes, there will at all times be a Paying Agent in Singapore, where the Notes may be presented or surrendered for payment or redemption.

In addition, the Issuer shall forthwith appoint a Paying Agent having a specified office in the City of New York in the circumstances described in the second paragraph of Condition 6.5 (*Payments – General provisions applicable to payments*). Any variation, termination, appointment or change shall only take effect (other than in the case of insolvency, when it shall be of immediate effect) after not less than 30 nor more than 45 days' prior notice thereof shall have been given to the Noteholders in accordance with Condition 14 (*Notices*).

In acting under the Agency Agreement, the Principal Paying Agent, the Registrar, the Exchange Agent, the Paying Agents and the Transfer Agents act solely as agents of the Issuer and do not assume any obligation or trust for or with any Noteholders, Receiptholders or Couponholders.

13 Exchange of Talons

On and after the Interest Payment Date on which the final Coupon comprised in any Coupon sheet matures, the Talon (if any) forming part of such Coupon sheet may be surrendered at the specified office of the Principal Paying Agent or any other Paying Agent in exchange for a further Coupon sheet including (if such further Coupon sheet does not include Coupons to (and including) the final date for the payment of interest due in respect of the Note to which it appertains) a further Talon, subject to the provisions of Condition 9 (*Prescription*). Each Talon shall, for the purposes of these Conditions, be deemed to mature on the Interest Payment Date on which the final Coupon comprised in the relative Coupon sheet matures.

14 Notices

Notices to holders of Registered Notes will be deemed to be validly given if sent by first class mail or (if posted to an overseas address) by air mail to the holders (or the first named of joint holders) at their respective addresses as recorded in the Register and will be deemed to have been validly given on the fourth day after the date of such mailing and, in addition, for so long as any Registered Notes are listed on a stock exchange and the rules of that stock exchange (or any other relevant authority) so require, such notice will be published in a daily newspaper of general circulation in the place or places required by those rules.

All notices regarding the Bearer Notes shall be deemed to be validly given if published (a) in a leading English language daily newspaper of general circulation in Asia and (b) if and for so long as the Bearer Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, a daily newspaper of general circulation in Singapore. The Issuer shall also ensure that notices are duly published in a manner which complies with the rules and regulations of any other stock exchange (or any other relevant authority) on which the Bearer Notes are for the time being listed. Any such notice will be deemed to have been given on the date of the first publication or, where required to be published in more than one newspaper, on the date of the first publication in all required newspapers.

Until such time as any definitive Notes are issued, there may (provided that, in the case of Notes listed on a stock exchange, the stock exchange agrees), so long as any Global Notes representing the Notes are held in their entirety on behalf of Euroclear and/or Clearstream and/or DTC, be substituted for such publication in such newspaper(s) the delivery of the relevant notice to Euroclear and/or Clearstream and/or DTC for communication by them to the holders of the Notes and, in addition, for so long as any Notes are listed on a stock exchange and the rules of that stock exchange (or any other relevant authority) so require, such notice will be published in a daily newspaper of general circulation in the place or places required by those rules. Any such notice shall be deemed to have been given to the holders of the Notes on the seventh day after the day on which the said notice was given to Euroclear and/or Clearstream and/or DTC.

Notices to be given by any holder of the Notes shall be in writing and given by lodging the same, together (in the case of any Note in definitive form) with the relative Note or Notes, with the Principal Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes). While any of the Notes are represented by a Global Note, such notice may be given by any holder of a Note to the Principal Agent or the Registrar via Euroclear and/or Clearstream and/or DTC, as the case may be, in such manner as the Principal Paying Agent, the Registrar and Euroclear and/or Clearstream and/or DTC, as the case may be, may approve for this purpose.

15 Meetings of Noteholders, Modification and Waiver

The Agency Agreement contains provisions for convening meetings of the Noteholders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution of a modification of the Notes, the Receipts, the Coupons or any of the provisions of the Agency Agreement. Such a meeting may be convened by the Issuer or Noteholders holding not less than 5% in nominal amount of the Notes for the time being remaining outstanding. The quorum at any such meeting for passing an Extraordinary Resolution is one or more persons holding or representing not less than 50% in nominal amount of the Notes for the time being outstanding, or at any adjourned meeting one or more persons being or representing Noteholders whatever the nominal amount of the Notes so held or represented, except that at any meeting the business of which includes the modification of certain provisions of the Notes, Receipts or Coupons (including modifying the date of maturity of the Notes or any date for payment of interest thereon, reducing or canceling the amount of principal or the rate of interest payable in respect of the Notes or altering the currency of payment of the Notes, Receipts or Coupons), the quorum shall be one or more persons holding or representing not less than 75% in nominal amount of the Notes for the time being outstanding, or at any adjourned such meeting one or more persons holding or representing not less than 25%, in nominal amount of the Notes for the time being outstanding. An Extraordinary Resolution passed at any meeting of the Noteholders shall be binding on all the Noteholders, whether or not they are present at the meeting, and on all Receiptholders and Couponholders.

The Principal Paying Agent and the Issuer may agree, without the consent of the Noteholders, Receiptholders or Couponholders, to:

(a) any modification (except as mentioned above) of any of the provisions of the Notes, the Receipts, the Coupons, the Conditions or the Agency Agreement which is not prejudicial to the interests of the Noteholders; or

(b) any modification of any of the provisions of the Notes, the Receipts, the Coupons, the Conditions or the Agency Agreement which is of a formal, minor or technical nature or is made to correct a manifest error or to comply with mandatory provisions of the law of the jurisdiction in which the Issuer is incorporated.

In addition, the Principal Paying Agent and the Issuer may agree, without the consent of the Noteholders, Receiptholders or Couponholders, to any Benchmark Amendments in the circumstances set out in Condition 5.2(b)(B)(2)(v) or to any Benchmark Replacement Conforming Changes in the circumstances set out in Condition 5.2(e)(B).

Any such modification shall be binding on the Noteholders, the Receiptholders and the Couponholders and any such modification shall be notified to the Noteholders in accordance with Condition 14 (*Notices*) as soon as practicable thereafter.

16 Further Issues

The Issuer may from time to time without the consent of the Noteholders, Receiptholders or Couponholders create and issue further notes having terms and conditions the same as the Notes or the same in all respects save for the amount and date of the first payment of interest thereon and so that the same shall be consolidated and form a single Series with the outstanding Notes; provided that further Notes must be fungible with the outstanding Notes for U.S. federal income tax purposes or be issued under a separate CUSIP or CINS number.

17 Governing Law and Submission to Jurisdiction

17.1 Governing law

The Agency Agreement, the Notes, the Receipts and the Coupons are governed by, and shall be construed in accordance with, the law of the State of New York.

17.2 Submission to jurisdiction

To the fullest extent permitted by applicable law, the Issuer irrevocably submits to the non-exclusive jurisdiction of any federal or state court located in the Borough of Manhattan, The City of New York, United States of America, in any suit, action or proceeding brought by any Noteholder, Receiptholder or Couponholder arising out of or based upon the Notes, the Receipts/or the Coupons, and irrevocably agrees that all claims in respect of any such suit, action or proceeding may be determined in any such court. The Issuer irrevocably waives, to the fullest extent permitted under applicable law, any objection it may have to the laying of venue in any such court and any claim that any such suit, action or proceeding brought in such a court has been brought in an inconvenient forum. The Issuer hereby appoints Law Debenture Corporate Services Inc., 801 2nd Avenue, Suite 403, New York, New York 10017, United States of America, as its authorized agent (the "Authorized Agent," which expression shall include any replacement authorized agent) upon whom process may be served in any such suit or proceeding set forth herein, it being understood that the designation and appointment of the Authorized Agent as such authorized agent shall become effective immediately without any further action on the part of the Issuer; provided that if for any reason the Authorized Agent named above ceases to act as Authorized Agent hereunder for the Issuer, the Issuer will appoint another person acceptable to the Dealers in the Borough of Manhattan, The City of New York and the State of New York, as Authorized Agent. The Issuer agrees to take any and all action as may be necessary, including the filing of any and all documents that may be necessary, to maintain such designation and appointment of the authorized agent in full force and effect. If for any reason the appointment of the Authorized Agent shall cease to be in force, the Issuer shall forthwith appoint a new agent to be the Authorized Agent and shall deliver to the Dealers and the Arranger a copy of the new Authorized Agent's acceptance for that appointment within 30 days. Service of process upon the Authorized Agent shall be deemed, in every respect, effective service of process upon the Issuer. The parties hereto each hereby waive any right to trial by jury in any action, proceeding or counterclaim arising out of or relating to the Notes, the Receipts and/or Coupons.

17.3 Other Documents

The Issuer has in the Agency Agreement submitted to the jurisdiction of the courts of the State of New York and appointed an agent for service of process in terms substantially similar to those set out in this Condition 17.

17.4 Waiver of immunity

The Issuer hereby irrevocably and unconditionally waives with respect to the Notes, the Receipts and the Coupons any right to claim sovereign or other immunity from jurisdiction or execution and any similar defense.

USE OF PROCEEDS

The net proceeds from each issue of Notes will be applied by the Issuer for its general corporate purposes or such other purposes as may be specified in the applicable Pricing Supplement.

EXCHANGE RATES

The table below sets forth, for the periods and dates indicated, information concerning the Market Average Exchange Rate for translations of Won amounts into U.S. dollars, rounded down to the nearest tenth of one Won. On May 3, 2022, the Market Average Exchange Rate was ₩1,265.8 to US$1.00. We do not intend to imply that the Won or U.S. dollar amounts referred to herein could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate, or at all.

Year Ended December 31,	At End of Period	Average Rate(1)	High	Low
	(Won per US$1.00)			
2013	1,055.3	1,095.0	1,159.1	1,051.5
2014	1,099.2	1,053.2	1,118.3	1,008.9
2015	1,172.0	1,131.5	1,203.1	1,068.1
2016	1,208.5	1,160.5	1,240.9	1,093.2
2017	1,071.4	1,130.8	1,208.5	1,071.4
2018	1,118.1	1,100.3	1,142.5	1,057.6
2019	1,157.8	1,165.7	1,218.9	1,111.6
2020	1,088.0	1,180.1	1,280.1	1,082.7
2021	1,185.5	1,144.4	1,199.1	1,083.1
2022 (through 3 May)	1,265.8	1,213.4	1,269.4	1,185.5
January	1,202.4	1,194.0	1,202.4	1,185.5
February	1,202.7	1,198.3	1,205.7	1,192.1
March	1,210.8	1,221.0	1,241.7	1,203.6
April	1,269.4	1,232.3	1,269.4	1,210.7
May (through 3 May)	1,265.8	1,265.6	1,265.8	1,265.4

Source: Seoul Money Brokerage Services, Ltd

Note:

(1) The average of the daily Market Average Exchange Rates for the periods indicated.

RISK FACTORS

Prospective investors in the Notes should carefully review all of the information contained elsewhere in this Offering Memorandum and the financial statements and the notes thereto, and should consider, in particular, the following factors before purchasing any Notes.

Risks Relating to the Issuer

The Issuer is subject to the control of the Government, and as a public entity that serves to implement the Government's public policy, certain actions of the Government may have a material adverse effect on the Issuer's financial condition and results of operations.

The Issuer was established under the KEC Act to develop, manage and operate expressways. The Issuer is under the direct supervision of the Road Policy Division, the central agency at the MOLIT which formulates all policies related to roads and reviews and coordinates plans prepared by various agencies. Under the Act on the Management of Public Institutions of 2007, as amended (the "Act on the Management of Public Institutions"), the MOLIT is responsible for overseeing the establishment of the Issuer's operational objectives, monitoring its operational and financial performance, overseeing its budgeting and approving revisions to its operating plans. In addition, the MOEF is responsible for the review of the financial results of the Issuer and also supervises matters concerning the compliance by the Issuer with the management guidelines set by the Government, including determination and approval of any toll rate increase in line with inflation and other economic targets of the Government. The President of Korea appoints the Issuer's president and standing member of the audit committee, and the president of the Issuer selects the standing directors and the MOEF selects the non-standing directors. See "Relationship with the Government – Government Control and Ownership."

On occasion, the Issuer may be requested to take action in furtherance of public policy considerations and the Government's broader objectives relating to the nation's transportation network, which may not necessarily be in the Issuer's best commercial interests. For example, from 1993 to 2006, the Issuer, at the request of the Government, made investments in five expressway construction and operation projects involving private investors. For these projects, the Issuer had not been able to fully recoup its investments and recognized capital reduction and impairment losses on intangibles. See "Management's Discussion and Analysis of Financial Condition and Results of Operations – Capital Reduction and Impairment Related to Investments in Privately Funded Expressway Projects."

The Issuer cannot make any assurances that future policy decisions by the Government will not have a material adverse effect on the Issuer's results of operations and financial condition.

The Government is not an obligor or guarantor of the Notes and is not legally required to provide financial support to the Issuer.

The Issuer is a Government-owned corporation with a mandate from the Government to construct and manage Korea's expressway network in accordance with the Road Act. As such, the Issuer has received and expects to continue to receive financial support from the Government for the costs of constructing expressways and related land acquisition costs as they relate to fulfillment of the Issuer's mandate under the Road Act. However, the Issuer's outstanding indebtedness, including the Notes, is not backed by the full faith and credit of the Government. The Government is not an obligor of the Notes and the Notes do not have any benefit of a guarantee from the Government although the Government has a statutory basis to provide a guarantee for the benefit of the Issuer. Furthermore, there is no statutory or other legal requirement for the Government to provide the Issuer with financial support to meet its outstanding debt obligations, including the Notes. The Government's support of the Issuer is subject to prior authorization by the National Assembly of Korea as part of the national budget approval process. Capital increase by issuing new shares from subscription by the Government in the Issuer amounted to ₩1,448 billion, ₩1,662 billion and ₩2,057 billion in 2019, 2020 and 2021, respectively. With respect to 2022, the Government has budgeted ₩2,396 billion for capital contribution to the Issuer. Although the Issuer expects that the Government will continue to provide financial support to the Issuer, the Government's inability or unwillingness to provide continued financial support in the future or a decrease in such financial support to the Issuer may have a material adverse effect on the Issuer's ability to meet its payment obligations on its outstanding indebtedness, including the Notes.

The Issuer anticipates that it will receive limited financial support from the Government in respect of, and as a result will need to incur substantial indebtedness for, its capital expenditures.

The Issuer finances the development of expressway projects through a combination of capital contributions from the Government, debt financing and cash flow from operations. The Issuer has historically received capital contributions from the Government, which have generally accounted for approximately 40% of the Issuer's budgeted construction costs and, since 2003, 100% of the Issuer's budgeted costs of acquiring related land. However, at times, the Government's capital contribution fell and in the future may fall below such level due to budgetary constraints or other public policy considerations. For example, the Government's actual subsidy ratio (defined as the ratio of the Government's capital contributions to the Issuer's actual costs for construction of new expressways and expansions) fell below the 40% level in 2006, 2007, 2008 and 2010. The actual subsidy ratio was 49%, 45% and 49% in 2019, 2020 and 2021, respectively. In respect of 2022, the Issuer budgeted construction costs of ₩4,850 billion and the Government budgeted capital contributions to the Issuer in the amount of ₩2,396 billion. No assurance can be given that capital contributions from the Government will rise to or above the 40% level in future periods, especially if the Government were to experience similar or more severe budgetary constraints or if such capital contributions were to be assigned a lower priority in the Government's budget allocation process. If the Government's capital contributions decrease significantly, the Issuer will be required to resort to outside financing to fund a larger amount of its capital expenditure and working capital, which would increase the finance costs of the Issuer and adversely affect the Issuer's financial condition and results of operation. In addition, the amount of toll rate discounts and exemptions mandated as public service obligations under the Government's public policy objectives (including compact car discounts, commuter time discounts and loaded vehicle discounts) amounted to ₩397 billion, ₩375 billion and ₩346 billion in 2019, 2020 and 2021, respectively. If the Government's capital contributions decrease significantly or the Issuer's public service obligations increase significantly, the Issuer will be required to resort to outside financing to fund a larger amount of its capital expenditure and working capital, which would increase the net finance costs of the Issuer and adversely affect the Issuer's financial condition and results of operation.

The amount of the Government's capital contribution is set at the beginning of the fiscal year based on the Issuer's estimated budget for total construction costs for that particular year, but the actual subsidy ratio at the end of the year may be lower than the subsidy ratio based on the budgeted amount due to, among other things, actual costs being higher than the originally budgeted amount. To finance capital expenditures not covered by contributions from the Government or cash flow from operations, the Issuer has incurred, and will be required to continue to incur, substantial amounts of indebtedness. There can be no assurance, however, that the required funds will be available to the Issuer in sufficient amounts or at all or that the costs of such financing will be commercially acceptable to the Issuer.

The Issuer has significant debt and may encounter difficulties in funding its future capital requirements, including debt repayments.

The Issuer's business is capital-intensive, and as a result, the Issuer has historically made, and is expected to continue to make, significant capital expenditures. The Issuer's capital expenditures (consisting of cash used for acquisition of intangible assets) for 2019, 2020 and 2021 were ₩3,864 billion, ₩4,775 billion and ₩5,414 billion respectively. These expenditures are related primarily to the acquisition of the expressway operating rights from the development and construction of expressways for the government and, to a lesser extent, related software. The Issuer has historically relied on its cash flow from operations, government support (in the form of capital contributions to the Issuer) and debt financings to meet its capital requirements. In 2019, 2020 and 2021, the Issuer raised ₩3,910 billion, ₩4,965 billion and ₩5,031 billion respectively, through Won, U.S. dollar and Australian dollar denominated bond issuances and long-term borrowings. As of December 31, 2021, the Issuer's long-term debt (including the current portion thereof and before taking into account the effect of hedging transactions) as a percentage of total equity was 77.2%. If the Issuer were to become unable to obtain financing for its capital expenditures or to refinance its existing debt in sufficient amounts, on commercially reasonable terms, or at all, it would have a material adverse effect on the Issuer's business, financial condition and results of operations, as well as the Issuer's ability to pay interest on or principal of the Notes.

In line with the general policy guideline of the Government for public enterprises (including the Issuer) in general to reduce their respective overall debt levels and as part of the Issuer's efforts to strengthen its financial health, the Issuer expects to manage its debt-to-equity ratio, mainly through adjusting the amount and schedule of expressway construction, sale of assets and cost savings from rationalizing maintenance expenses. The Issuer's debt-to-equity ratio was 83.0% as of December 31, 2021. However, there is no assurance that, due to Government policy, prevailing market conditions and macroeconomic factors beyond the Issuer's control, the Issuer will be able to successfully reduce and manage debt burdens to a level contemplated under the comprehensive plan or to a level that would be optimal for the Issuer's capital structure. If the Issuer fails to do so or the measures taken by the Issuer to so reduce and manage the debt burdens have unintended adverse consequences, such developments may have an adverse effect on the Issuer's business, results of operation and financial condition.

The Issuer is subject to various operational risks, any of which could give rise to significant delays or additional costs.

The construction and operation of large infrastructure projects, such as the expressways operated by the Issuer, involve many potential risks, including natural disasters, the need to change the construction design of expressways and opposition by community or special interest groups to the construction and operation of expressways. Any such risks, if realized, could give rise to delays or other adverse developments, such as lawsuits, and result in loss of revenue and cost overruns, which may have a material adverse effect on the Issuer's results of operations.

In particular, the occurrence of natural disasters such as typhoons, heavy snowfalls, floods or earthquakes could interrupt and have an adverse impact on the Issuer's business, leading to decreased revenue and increased maintenance and construction costs. Natural disasters that result in substantial traffic delays or damage to road conditions can also expose the Issuer to complaints and lawsuits from motorists. The Issuer does not have insurance coverage for natural disasters.

In addition, protests and other forms of opposition by environmental interest groups, such as lawsuits or demonstrations, may delay the Issuer's construction projects. While the activities of special interest groups historically have not had a material adverse effect on the Issuer's projects, no assurance can be given that such activities in the future will not cause the Issuer to experience significant delays or additional costs.

The Issuer's expressway construction and operation activities have in the past been, and continue to be, subject of various lawsuits against the Issuer, as a result of, among other things, traffic accidents, environmental concerns and disputes relating to land acquisitions and the placement of expressway routes. In some cases, these lawsuits involve mass tort or other class action type of litigation brought by special interest groups (such as environmental activists) or by communities that are affected by the Issuer's construction or other operational activities (such as noise pollution caused by traffic along the Issuer's expressways). There can be no assurance that currently pending or future lawsuits, if determined adversely to the Issuer, would not have a material adverse effect on the Issuer and its business.

Decreases in traffic volume, including as a result of rising fuel prices, could adversely affect the Issuer's results of operations.

The Issuer's toll revenue, which represents the principal source of operating profit and cash from operations, depends on traffic volume and toll rates. In turn, traffic volume depends on a number of factors, including the quality, convenience and travel time on the expressways operated by the Issuer compared to alternative roads, the economic climate in Korea, legislation designed to curb motor vehicle use (including measures to restrict private motor vehicle use to reduce traffic and air pollution and measures to promote the use of public transportation, such as the "bus-only lane" policy), and the viability and existence of alternative means of transportation. In addition, rising fuel prices are likely to lead to a decrease in motor vehicle use. Due to these and other factors, no assurance can be given that traffic volume and toll rates will not decrease.

In addition, although the Issuer does not believe that other modes of transportation, such as the high-speed railways or the expressways funded by private capital, currently pose a significant threat to the Issuer's business, no assurance can be given that these alternative means of transportation or other new means of transportation will not in the future have a material adverse effect on the Issuer's business, financial condition or results of operation. See "Business – Competition."

Any decrease in toll rates, or the failure of the Issuer to obtain the approval of the Government to increase toll rates, may adversely affect the Issuer's operating results and financial condition.

Increases in toll rates, which are subject to approval by the MOLIT upon consultation with the MOEF, occur on a periodic basis. Before implementing any toll rate increase, the Issuer engages in prior consultation with the MOLIT and the MOEF. Factors considered in determining whether toll rates will be increased and the extent of any such increase include the prevailing inflation level in Korea, perceived and actual affordability of the toll rates to the general public, macroeconomic conditions, the Government's general public policy considerations and the Issuer's need to balance toll revenue with the Issuer's expenses.

No assurance can be given that the Government will approve the Issuer's requests for a toll rate increase in a timely manner, or at all. The Government's refusal to allow a toll rate increase may have a material adverse effect on the Issuer's revenue and ability to repay its obligations on its outstanding indebtedness, including the Notes. In addition, although the Issuer has not been required by the Government to reduce toll rates or reduce the total number of, or materially change the location of, the toll plazas on the expressways operated by the Issuer, no assurance can be given that the Government will not require the Issuer to do so in the future.

Environmental regulations may limit the Issuer's operations.

The Issuer is required to comply with numerous laws and regulations relating to the protection of the environment and land use. See "Business – Environmental Matters." These laws and regulations are constantly changing and the Issuer's operations could expose it to substantial liability relating to environmental or health and safety issues, such as those resulting from noise pollution, discharge of pollutants into the environment, the handling, storage and disposal of solid or hazardous materials or wastes and the investigation and remediation of contaminated sites. The Issuer may be responsible for the investigation and remediation of environmental conditions at currently and formerly operated construction sites. The Issuer may also be subject to associated liabilities, including liabilities for natural resource damage, third party property damage or personal injury resulting from lawsuits brought by the Government or private litigants. In the course of the Issuer's operations, hazardous wastes may be generated at third party-owned or operated sites, and hazardous wastes may be disposed of or treated at third party-owned or operated disposal sites. If those sites become contaminated, the Issuer could also be held responsible for the cost of investigation and remediation of such sites, any associated natural resource damage, and civil or criminal fines or penalties. Any one or more of the foregoing could have a material adverse effect on the Issuer and its business.

While the Issuer believes that it has obtained all material environmental and construction approvals and permits currently required to own and operate its facilities and engage in its construction activities, the Issuer may incur significant additional costs as a result of these requirements. In addition, there can be no assurance that the requirements to obtain such approvals and permits may not be made more stringent in the future and that such approvals and permits would be renewed when they expire, and the failure to so obtain or renew could have a material adverse effect on the Issuer and its business.

Following from the 2013 decision of the Supreme Court of Korea, the Issuer may be exposed to potential claims made by current or previous employees for unpaid wages for the past three years under the expanded scope of ordinary wages and become subject to additional labor costs arising from the broader interpretation of ordinary wages under such decision.

Under the Labor Standards Act, an employee is legally entitled to "ordinary wages." Under the guidelines previously issued by the Ministry of Employment and Labor, ordinary wages include base salary and certain fixed monthly allowances for work performed overtime during night shifts and holidays. Prior to the Supreme Court decision described below, many companies in Korea had typically interpreted these guidelines as excluding from the scope of ordinary wages fixed bonuses that are paid other than on a monthly basis, namely on a bi-monthly, quarterly or biannually basis, although such interpretation had been a subject of controversy and had been overruled in a few court cases.

In a decision rendered on December 18, 2013, the Supreme Court of Korea ruled that regular bonuses (including those that are paid other than on a monthly basis) shall be deemed to be ordinary wages if these bonuses are paid "regularly" and "uniformly" on a "fixed basis" notwithstanding differential amounts based on seniority. Under this decision, any collective bargaining agreement or labor-management agreement which attempts to exclude such regular bonuses from ordinary wage will be deemed void for violation of the mandatory provisions of Korean law. However, the Supreme Court further ruled that an employee's claim for underpayments under the expanded scope of ordinary wages for the past three years, which is the applicable statute of limitations for such claims, may be denied based on the principles of good faith in certain limited situations.

Although the Issuer believes that the amount of such additional labor costs or any additional costs arising from potential claims made by current or previous employees for unpaid wages within the applicable statute of limitations of three years under the expanded scope of ordinary wages will be limited, there is no assurance that such additional costs will not have an adverse effect on its results of operation and cash flows. For other potentially material litigation, see "Business – Litigation."

Risks Relating to Korea

If economic conditions in Korea deteriorate, the Issuer's current business and future growth could be materially and adversely affected.

The Issuer is incorporated in Korea and a significant portion of its assets are located in Korea. As a result, the Issuer is subject to political, economic, legal and regulatory risks specific to Korea, and the Issuer's performance and successful execution of its operational strategies are dependent on the overall Korean economy. The economic indicators in Korea in recent years have shown mixed signs of growth and uncertainty, and future growth of the Korean economy is subject to many factors beyond the Issuer's control, including developments in the global economy.

Developments that could have an adverse impact on Korea's economy include:

- declines in consumer confidence and a slowdown in consumer spending;
- the occurrence of severe health epidemics, such as the ongoing COVID-19 pandemic;
- adverse conditions or uncertainty in the economies of countries and regions that are important export markets for Korea, such as China, the United States, Europe and Japan, or in emerging market economies in Asia or elsewhere, including as a result of the ongoing COVID-19 pandemic, deteriorating relations between the United States and China and increased uncertainties resulting from the United Kingdom's exit from the European Union;
- adverse changes or volatility in foreign currency reserve levels, commodity prices (including oil prices), exchange rates;
- deterioration in economic or diplomatic relations between Korea and its trading partners or allies, including deterioration resulting from territorial or trade disputes or disagreements in foreign policy (such as the removal of Korea from Japan's "white list" of preferred trading nations in August 2019 and the controversy between Korea and China regarding the deployment of a Terminal High Altitude Area Defense System in Korea by the United States in March 2017 and the ensuing economic and other retaliatory measures by China against Korea during the remainder of 2017);
- increased sovereign default risk in select countries and the resulting adverse effects on the global financial markets, including the possibility of global inflation and the spread of economic recession to Europe as a result of geopolitical risks arising from the Russia-Ukraine conflict;
- deterioration in the financial condition or performance of small- and medium-sized enterprises and other companies in Korea due to the Government's policies to increase minimum wages and limit working hours of employees;
- investigations of large Korean business groups and their senior management for possible misconduct;
- a continuing rise in the level of household debt and increasing delinquencies and credit defaults by retail and small- and medium-sized enterprise borrowers in Korea;

- the economic impact of any pending or future free trade agreements or of any changes to existing free trade agreements;

- social and labor unrest;

- substantial decreases in the market prices of Korean real estate;

- the continued growth of the Chinese economy, to the extent its benefits (such as increased exports to the People's Republic of China ("**PRC**")) are outweighed by its costs (such as competition in export markets or for foreign investment and the relocation of the manufacturing base from Korea to the PRC), as well as a slowdown in the growth of the PRC's economy, which is Korea's most important export market;

- the economic impact of any pending or future free trade agreements or of any changes to existing free trade agreements;

- a substantial decrease in tax revenues and a substantial increase in the Government's expenditures for fiscal stimulus measures, unemployment compensation and other economic and social programs, in particular in light of the Government's ongoing efforts to provide emergency relief payments to households and emergency loans to corporations in need of funding in light of COVID-19, which, together, would likely lead to a national budget deficit as well as an increase in the Government's debt;

- financial problems or lack of progress in the restructuring of Korean business groups, other large troubled companies, their suppliers or the financial sector;

- loss of investor confidence arising from corporate accounting irregularities and corporate governance issues concerning certain Korean companies;

- increases in social expenditures to support an aging population in Korea or decreases in economic productivity due to the declining population size in Korea;

- geopolitical uncertainty and risk of further attacks by terrorist groups around the world;

- political uncertainty or increasing strife among or within political parties in Korea;

- hostilities or political or social tensions involving oil producing countries in the Middle East (including a potential escalation of hostilities between the United States and Iran) and Northern Africa and any material disruption in the global supply of oil or sudden increase in the price of oil;

- natural or man-made disasters that have a significant adverse economic or other impact on Korea or its major trading partners;

- increased reliance on exports to service foreign currency debts, which could cause friction with Korea's trading partners;

- political or social tensions involving Russia (including the invasion of Ukraine by Russia and ensuing actions that the United States and other countries have taken or may take in the future) and the resulting adverse effects on the global supply of oil and other natural resources and the global financial markets;

- volatility of the won-dollar exchange rate as internal and external uncertainties, such as from the Russia-Ukraine conflict, continue to grow and preference for safe assets also grow;

- changes in financial regulations in Korea; and

- an increase in the level of tensions or an outbreak of hostilities between North Korea and Korea or the United States.

Escalations in tensions between Korea and North Korea could have an adverse effect on the Issuer.

Relations between Korea and North Korea have been tense throughout Korea's modern history. The level of tension between the two Koreas has fluctuated and may increase abruptly as a result of current and future events. In particular, there have been heightened security concerns in recent years stemming from North Korea's nuclear weapon and ballistic missile programs as well as its hostile military actions against Korea. Some of the significant incidents in recent years include the following:

- North Korea renounced its obligations under the Nuclear Non-Proliferation Treaty in January 2003 and conducted six rounds of nuclear tests since October 2006, including claimed detonations of hydrogen bombs, which are more powerful than plutonium bombs, and warheads that can be mounted on ballistic missiles. Over the years, North Korea has also conducted a series of ballistic missile tests, including missiles launched from submarines and intercontinental ballistic missiles that it claims can reach the United States mainland. In response, the Government has repeatedly condemned the provocations and flagrant violations of relevant United Nations Security Council resolutions. In February 2016, the Government also closed the inter-Korea Gaesong Industrial Complex in response to North Korea's fourth nuclear test in January 2016. Internationally, the United Nations Security Council has passed a series of resolutions condemning North Korea's actions and significantly expanding the scope of sanctions applicable to North Korea, most recently in December 2017 in response to North Korea's intercontinental ballistic missile test in November 2017. Over the years, the United States and the European Union have also expanded their sanctions applicable to North Korea.

- In August 2015, two Korean soldiers were injured in a landmine explosion near the Korean demilitarized zone. Claiming that the landmines were set by North Koreans, the Korean army re-initiated its propaganda program toward North Korea utilising loudspeakers near the demilitarized zone. In retaliation, the North Korean army fired artillery rounds on the loudspeakers, resulting in the highest level of military readiness for both Koreas.

- In March 2010, a Korean naval vessel was destroyed by an underwater explosion, killing many of the crewmen on board. The Government formally accused North Korea of causing the sinking, while North Korea denied responsibility. Moreover, in November 2010, North Korea fired more than one hundred artillery shells that hit Korea's Yeonpyeong Island near the Northern Limit Line, which acts as the de facto maritime boundary between Korea and North Korea on the west coast of the Korean peninsula, causing casualties and significant property damage. The Government condemned North Korea for the attack and vowed stern retaliation should there be further provocation.

North Korea's economy also faces severe challenges, which may further aggravate social and political pressures within North Korea.

Although bilateral summit meetings were held between Korea and North Korea in April, May and September 2018 and between the United States and North Korea in June 2018, February 2019 and June 2019, there can be no assurance that the level of tension affecting the Korean peninsula will not escalate in the future. Any increase in tensions, which may occur, for example, if North Korea experiences a leadership crisis, if high-level contacts between Korea or the United States and North Korea break down or if further military hostilities occur, could have a material adverse effect on the Korean economy and on the Issuer's business, financial condition and results of operations.

There are special risks involved with investing in securities of Korean companies.

As the Issuer is a Korean company and operates in a business and cultural environment that is different from that of other countries, there are risks associated with investing in its securities that are not typical for investments in securities of companies in other jurisdictions.

Under the Foreign Exchange Transactions Act of Korea and the Presidential Decree and regulations under that Act and Decree (collectively referred to as the "**Foreign Exchange Transaction Laws**"), if the Government deems that certain emergency circumstances, including sudden fluctuations in interest rates or exchange rates, extreme difficulty in stabilising the balance of payments or substantial disturbance in the Korean financial and capital markets, are likely to occur, it may impose any necessary restriction such as requiring Korean or foreign investors to obtain prior approval from the Minister of the MOEF for the acquisition of Korean securities or for the repatriation of interest, dividends or sales proceeds arising from Korean securities or other types of capital transactions. Moreover, if the Government deems it necessary on account of war, armed conflict, natural disaster or grave and sudden changes in domestic or foreign economic circumstances or similar events or circumstances, the Minister of the MOEF may temporarily suspend performance under any or all foreign exchange transactions, in whole or in part, to which the Foreign Exchange Transaction Laws apply (including suspension of payment and receipt of foreign exchange) or impose an obligation to deposit or sell any means of payment to the Bank of Korea or certain other governmental agencies or financial institutions.

In addition, the Issuer's audited consolidated financial statements included in this Offering Memorandum are presented in accordance with the Government Accounting Standards, which mandates application of K-IFRS where specific accounting treatments are not prescribed by the Government Accounting Standards, which differ in certain respects from accounting principles applicable to companies in certain other countries. It also makes regulatory filings and disclosures regarding other aspects of its business in accordance with applicable rules and regulations and accepted practice in Korea. These filing and disclosure rules and practices differ in many material respects from those applicable to companies in certain other countries. There may also be less publicly available information about Korean companies, such as us, than is regularly made available by public companies in other countries. In making an investment decision, investors must rely upon their own examination of the Issuer, the terms of the offering and the financial and other information contained in this Offering Memorandum.

Labour unrest in Korea may adversely affect the Issuer's operations.

Economic difficulties in Korea or increases in corporate reorganisations and bankruptcies could result in layoffs and higher unemployment. Such developments could lead to social unrest and substantially increase government expenditures for unemployment compensation and other costs for social programs. According to statistics from the Korea National Statistical Office, the unemployment rate decreased from 4.0% in 2020 to 3.7% in 2021. Further, increases in unemployment and any resulting labour unrest in the future could adversely affect the Issuer's operations, as well as the operations of many of the Issuer's customers and their ability to repay their loans, and could adversely affect the financial condition of Korean companies in general, depressing the price of their securities. These developments would likely have an adverse effect on the Issuer's financial condition and results of operations.

Risks Relating to the Notes

The Notes are unsecured obligations.

Because the Notes, when issued, will be unsecured obligations, the Issuer's ability to pay interest or principal on the Notes may be adversely affected if the Issuer enters into bankruptcy, liquidation, reorganization or other similar proceedings, the Issuer defaults under its future secured indebtedness or other unsecured indebtedness, or the Issuer's indebtedness becomes accelerated. If any of the foregoing events occurs, the Issuer's assets may not be sufficient to pay all the amounts due upon the occurrence of such event and holders of the Notes will be unsecured creditors of the Issuer.

The market continues to develop in relation to risk-free rates (including overnight rates) as reference rates for Floating Rate Notes.

Investors should be aware that the market continues to develop in relation to risk-free rates, as reference rates in the capital markets and their adoption as alternatives to the relevant interbank offered rates. For example, on 29 November 2017, the Bank of England and the United Kingdom Financial Conduct Authority announced that the Bank of England's Working Group on Sterling Risk-Free Rates had been mandated with implementing a broad-based transition to the Sterling Overnight Index Average ("**SONIA**") over the following four years across sterling bond, loan and derivatives markets, so that SONIA is established as the primary sterling interest rate benchmark by the end of 2021. The New York Federal Reserve (the "**NY Federal Reserve**") also began to publish SOFR in April 2018, and the Alternative Reference Rates Committee (the "**ARRC**") has published its Paced Transition Plan which outlines the key milestones until the end of 2021 to facilitate a smooth and orderly transition from USD LIBOR to SOFR.

In addition, market participants and relevant working groups are exploring alternative reference rates based on risk-free rates, examples of which include Term SONIA reference rates and Term SOFR reference rates (which seek to measure the market's forward expectation of an average SONIA or SOFR rate over a designated term).

The market or a significant part thereof may adopt an application of risk-free rates that differs significantly from that set out in the Conditions and used in relation to any that reference risk-free rates issued under the Programme. The Issuer may in the future also issue Notes referencing risk-free rates that differ materially in terms of interest determination when compared with any previous Notes referencing the same risk-free rate issued by it under the Programme. The development of risk-free rates as interest reference rates for the Eurobond markets and of the market infrastructure for adopting such rates could result in reduced liquidity or increased volatility or could otherwise affect the market price of any Notes issued under the Programme which references any such risk-free rate from time to time.

Furthermore, the basis of deriving certain risk-free rates, such as SONIA Benchmark or SOFR Benchmark, may mean that interest on Notes which reference any such risk-free rate would only be capable of being determined after the end of the relevant Observation Period and immediately prior to the relevant Interest Payment Date. It may be difficult for investors in Notes which reference any such risk-free rate to accurately estimate the amount of interest which will be payable on such Notes, and some investors may be unable or unwilling to trade such Notes without changes to their IT systems, both of which could adversely impact the liquidity of such Notes. Further, if Notes referencing SONIA Benchmark or SOFR Benchmark become due and payable as a result of an event of default under Condition 10(a), the rate of interest payable for the final Interest Period in respect of such Notes shall only be determined on the date which the Notes become due and payable and shall not be reset thereafter. Investors should consider these matters when making their investment decision with respect to any such Notes.

In addition, the manner of adoption or application of risk-free rates in the Eurobond markets may differ materially compared with the application and adoption of such risk-free rates in other markets, such as the derivatives and loan markets. Investors should carefully consider how any mismatch between the adoption of risk-free rates across these markets may impact any hedging or other financial arrangements which they may put in place in connection with any acquisition, holding or disposal of Notes referencing such risk-free rates.

Since risk-free rates are relatively new market indices, Notes linked to any such risk-free rate may have no established trading market when issued, and an established trading market may never develop or may not be very liquid. Market terms for debt securities indexed to any risk-free rate, such as the spread over the index reflected in interest rate provisions, may evolve over time, and trading prices of such Notes may be lower than those of later-issued indexed debt securities as a result. Further, if any risk-free rate to which a series of Notes is linked does not prove to be widely used in securities like the Notes, the trading price of such Notes linked to a risk-free rate may be lower than those of Notes linked to indices that are more widely used. Investors in such Notes may not be able to sell such Notes at all or may not be able to sell such Notes at prices that will provide them with a yield comparable to similar investments that have a developed secondary market, and may consequently suffer from increased pricing volatility and market risk. Daily changes in such rates may also be more volatile than daily changes in other benchmarks or market rates, such that the value on and value of Notes linked to risk-free rates may fluctuate more than floating rate debt securities linked to less volatile rates. There can also be no guarantee that any risk-free rate to which a series of Notes is linked will not be discontinued or fundamentally altered in a manner that is materially adverse to the interests of investors in Notes referencing such risk-free rate. If the manner in which such risk-free rate is calculated is changed, that change may result in a reduction of the amount of interest payable on such Notes and the trading prices of such Notes.

The Notes are subject to transfer restrictions.

The Notes will not be registered under the Securities Act or any state securities laws and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons, except to qualified institutional buyers in reliance on the exemption provided by Rule 144A or other specified exemptions, to certain persons in offshore transactions in reliance on Regulation S, or pursuant to another exemption from, or in another transaction not subject to, the registration requirements of the Securities Act and in accordance with applicable state securities laws.

The Notes are not protected by restrictive covenants.

The Notes and the Agency Agreement do not contain various restrictive financial, operating or other covenants or restrictions, including the payment of dividends, the incurrence of indebtedness or the issuance of securities by the Issuer.

There is no existing trading market for the Notes and, therefore the Notes offer limited liquidity.

The Notes, when issued, will constitute a new issue of securities for which there will be no existing trading market. Application will be made to the Singapore Stock Exchange for the listing and quotation of Notes that may be issued pursuant to the Program and which are agreed at or prior to the time of issue thereof to be so listed on the Singapore Stock Exchange. Although the Dealers have advised the Issuer that they currently intend to make a market in the Notes, they are not obligated to do so, and any market-making activity with respect to the Notes, if commenced, may be discontinued at any time without notice.

No assurance can be given as to the liquidity of, or the development and continuation of an active trading market for, the Notes. If an active trading market for the Notes does not develop or is not maintained, the market price and liquidity of the Notes may be adversely affected. If such a market were to develop, the Notes could trade at prices that may be higher or lower than the price at which the Notes are issued depending on many factors, including:

- prevailing interest rates;

- the Issuer's results of operations and financial condition;

- political and economic developments in and affecting Korea;
- the market conditions for similar securities; and
- the financial condition and stability of the financial sector in Korea and other parts of the world.

Notes issued as Green Bonds, Social Bonds or Sustainability Bonds may not be a suitable investment for all investors seeking exposure to green assets, social assets or sustainability assets.

The Issuer may issue Notes under the Program which are specified to be "Green Bonds," "Social Bonds" or "Sustainability Bonds" in the applicable Pricing Supplement (any such Notes, "Green Bonds", "Social Bonds" or "Sustainability Bonds", respectively), in accordance with the KEC Sustainable Finance Framework. In connection with an issue of Green Bonds, Social Bonds or Sustainability Bonds, the Issuer may request a sustainability rating agency or sustainability consulting firm to issue an independent opinion (a "Second Party Opinion") confirming that any Green Bonds, Social Bonds or Sustainability Bonds are in compliance with the Green Bond Principles 2018 ("GBP 2018"), ICMA (the "ICMA Green Bond Principles"), the Social Bond Principles 2020 ("SBP 2020"), ICMA (the "ICMA Social Bond Principles") or the Sustainability Bond Guidelines 2018 ("SBG 2018"), ICMA (the "ICMA Sustainability Bond Guidelines"). The ICMA Green Bond Principles, the ICMA Social Bond Principles and the ICMA Sustainability Bond Guidelines are a set of voluntary guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond, social bond and sustainability bond markets.

There is currently no market consensus on what precise attributes are required for a particular project to be defined as "green," "social" or "sustainability," and therefore no assurance can be provided to potential investors that the Green Eligible Categories, Social Eligible Categories or a combination of the two categories (in the case of Sustainability Bonds) will continue to meet the relevant eligibility criteria. Although applicable green projects, social projects or sustainability projects are expected to be selected in accordance with the categories recognized by the ICMA Green Bond Principles, the ICMA Social Bond Principles or the ICMA Sustainability Bond Guidelines and are expected to be developed in accordance with applicable legislation and standards, there can be no guarantee that adverse environmental and/or social impacts will not occur during the design, construction, commissioning and/or operation of any such green projects, social projects or sustainability projects. Where any negative impacts are insufficiently mitigated, green projects, social projects or sustainability projects may become controversial, and/or may be criticized by activist groups or other stakeholders.

Potential investors should be aware that any Second Party Opinion will not be incorporated into, and will not form part of, this Offering Circular or the applicable Pricing Supplement. Any such Second Party Opinion may not reflect the potential impact of all risks related to the structure of the relevant Series of Green Bonds, Social Bonds or Sustainability Bonds, their marketability, trading price or liquidity or any other factors that may affect the price or value of the Green Bonds, Social Bonds or Sustainability Bonds. Any such Second Party Opinion is not a recommendation to buy, sell or hold securities and is only current as of its date of issue.

Furthermore, although the Issuer may agree at the relevant issue date of any Green Bonds, Social Bonds or Sustainability Bonds to allocate the net proceeds towards the financing and/or refinancing of Green Eligible Categories, Social Eligible Categories or a combination of the two categories (in the case of Sustainability Bonds) in accordance with certain prescribed eligibility criteria as described under the KEC Sustainable Finance Framework, it would not be an event of default under the Green Bonds, Social Bonds or Sustainability Bonds if (i) the Issuer were to fail to comply with such undertaking or were to fail to allocate the proceeds in the manner specified in the applicable Pricing Supplement and/or (ii) any Second Party Opinion issued in connection with such Green Bonds were to be withdrawn. Any failure to allocate the net proceeds of any Series of Green Bonds, Social Bonds or Sustainability Bonds in connection with green projects, social projects or sustainability projects and/or any failure to meet, or to continue to meet, the investment requirements of certain environmentally or socially focused investors with respect to such Green Bonds, Social Bonds or Sustainability Bonds may affect the value and/or trading price of the Green Bonds, Social Bonds or Sustainability Bonds, and/or may have consequences for certain investors with portfolio mandates to invest in green assets, social assets or sustainability assets.

Neither the Issuer nor the Dealers make any representation as to the suitability for any purpose of any Second Party Opinion or whether any Green Bonds, Social Bonds or Sustainability Bonds fulfill the relevant environmental or social criteria. Prospective investors should have regard to the relevant Green Eligible Categories, Social Eligible Categories or a combination of the two categories (in the case of Sustainability Bonds) and the use of proceeds described in the applicable Pricing Supplement. Each potential purchaser of any Series of Green Bonds, Social Bonds or Sustainability Bonds should determine for itself the relevance of the information contained in this Offering Circular and in the applicable Pricing Supplement regarding the use of proceeds and its purchase of any Green Bonds, Social Bonds or Sustainability Bonds should be based upon such investigation as it deems necessary.

CAPITALIZATION OF THE ISSUER

The following table sets forth the capitalization of the Issuer, as derived from the audited consolidated financial statements as of and for the year ended December 31, 2021, which are included elsewhere in this Offering Memorandum.

The table below should be read in conjunction with:

- the Issuer's audited consolidated financial statements and the notes thereto as of and for the year ended December 31, 2021, which are included elsewhere in this Offering Memorandum; and
- "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	As of December 31, 2021(1)	
	(in billions of Won and millions of U.S. dollars)(2)	
Debt:		
Borrowings	₩1,100	$928
Bonds, net of discounts and including financial liabilities at fair value through profit or loss(3)	29,871	25,197
Total debt	30,971	26,125
Equity:		
Share capital, par value ₩10,000 per share (Authorized: 4,000,000,000 common shares; Issued and outstanding: 3,865,608,773 common shares, net)(4)	38,656	32,607
Share discount	(17)	(15)
Retained earnings	1,478	1,247
Other components of equity	2	1
Equity attributable to owners of the Issuer	40,119	33,841
Non-controlling interests	–	–
Total equity	40,119	33,841
Total capitalization(5)	₩71,090	$59,966

Notes:

(1) Except as disclosed herein, there has been no material adverse change in the capitalization of the Issuer since December 31, 2021.

(2) The Issuer maintains its consolidated financial statements in Won. The Won financial information for the year ended December 31, 2021 has been translated into U.S. dollars at the exchange rate of ₩1,185.5 to US$1.00, which was the Market Average Exchange Rate in effect as of December 31, 2021.

(3) Between December 31, 2021 and March 31, 2022, the Issuer has issued Won-denominated bonds in the aggregate amount of ₩950 billion. All of these bonds, after accounting for interest rate swaps, are on a fixed rate basis with interest rates per annum in the range of 2.339% to 2.909%. The Issuer does not have any outstanding convertible or exchangeable debt securities or debt securities with warrants attached.

(4) Between December 31, 2021 and March 31, 2022, additional capital contributions in the aggregate amount of ₩1,078 billion were made by the MOLIT, resulting in 107,821,000 additional shares being issued to the MOLIT. As a result, the Issuer currently has 3,973,429,773 shares of total issued and outstanding common stock. Such additional capital contributions have not been reflected in the table above.

(5) Total capitalization consists of total debt and total equity. The Issuer has included such metric because management believes it provides useful supplemental information as to the Issuer's capital structure.

SELECTED FINANCIAL DATA

The following tables set forth selected consolidated financial data with respect to the Issuer. The selected financial data of the Issuer as of and for the years ended December 31, 2019, 2020 and 2021 were derived from the Issuer's audited consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021, respectively.

The selected financial data below should be read in conjunction with the Issuer's audited consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021 and the notes to these consolidated financial statements, which are included elsewhere in this Offering Memorandum.

The Issuer's consolidated financial statements included elsewhere in this Offering Memorandum have been prepared in accordance with the Government Accounting Standards for Public Corporations and Quasi-governmental Institutions in the Republic of Korea, which may differ in certain respects from IFRS applied in other countries.

	For the year ended December 31,			
	2019	2020	2021	
	(in billions of Won and millions of U.S. dollars)(1)			
Consolidated Statements of profit or loss and other comprehensive income				
Revenue:				
Toll business	₩4,122	₩3,964	₩4,179	U.S.$3,525
Construction business	3,739	4,608	5,239	4,419
Incidental business	688	662	871	735
Supporting business	173	324	246	207
Total	8,722	9,558	10,535	8,887
Cost of sales:				
Toll business	2,763	3,127	3,332	2,811
Construction business	3,739	4,608	5,239	4,419
Incidental business	526	553	768	648
Supporting business	173	324	246	207
Total	7,201	8,612	9,585	8,085
Gross profit	1,521	945	950	801
Selling and administrative expenses	283	322	331	279
Operating profit	1,239	623	619	522
Other income	105	127	144	121
Other expenses	349	342	118	100
Other loss, net	(20)	(15)	(7)	(6)
Finance income	144	173	230	194
Finance costs	851	791	829	699
Gain (loss) related to associates and joint ventures	0	(3)	2	2
Profit (loss) before income tax	267	(228)	40	34
Income tax expense (benefit)	168	(255)	7	6
Profit for the year	₩100	₩27	₩34	U.S.$28

Note:

(1) The Issuer maintains its consolidated financial statements in Won. The Won financial information for the year ended December 31, 2021 has been translated into U.S. dollars at the exchange rate of ₩1,185.5 to US$1.00, which was the Market Average Exchange Rate in effect as of December 31, 2021.

	As of December 31,			
	2019	**2020**	**2021**	
	(in billions of Won and millions of U.S. dollars)[1]			
Selected Consolidated Statements of Financial Position Data				
Assets:				
Cash and cash equivalents	₩737	₩508	₩557	U.S.$470
Other current assets[2]	464	710	888	749
Total current assets	1,201	1,218	1,445	1,219
Construction in-progress and intangible assets under development	8,815	10,685	15,422	13,009
Expressway operating rights[3]	53,298	54,727	53,800	45,382
Other non-current assets[4]	2,467	2,558	2,735	2,307
Total non-current assets	64,580	67,970	71,957	60,698
Total assets	₩65,781	₩69,188	₩73,402	U.S.$61,916
Liabilities:				
Current portion of bonds	₩2,923	₩2,853	₩3,036	U.S.$2,561
Other current liabilities[5]	1,274	1,486	1,621	1,367
Total current liabilities	4,197	4,339	4,657	3,928
Bonds[6]	23,039	24,952	26,732	22,549
Other non-current liabilities[7]	2,218	1,875	1,894	1,598
Total non-current liabilities	25,257	26,827	28,626	24,147
Total liabilities	29,454	31,166	33,283	28,075
Equity:				
Share capital	34,937	36,600	38,656	32,607
Other equity[8]	1,391	1,422	1,463	1,234
Total equity	36,328	38,022	40,119	33,841
Total liabilities and equity	₩65,781	₩69,188	₩73,402	U.S.$61,916

Notes:

(1) The Issuer maintains its financial statements in Won. The Won financial information as of and for the year ended December 31, 2021 has been translated into U.S. dollars at the exchange rate of ₩1,185.5 to US$1.00, which was the Market Average Exchange Rate in effect as of December 31, 2021.

(2) Represents the sum of financial assets at fair value through profit or loss, short-term loans and receivables, short-term financial instruments, derivatives assets, other financial assets, trade and other receivables, inventories, current tax assets and other non-financial assets.

(3) Net of accumulated amortization of ₩29,942 billion, ₩31,518 billion and ₩33,218 billion as of December 31, 2019, 2020 and 2021, respectively.

(4) Represents the sum of financial assets at fair value through profit or loss, financial assets at fair value through other comprehensive income, derivatives assets, long-term loans and receivables, trade and other receivables, property and equipment, investment properties, intangible assets (excluding intangible assets under development), investments in associates and joint ventures and other non-financial assets.

(5) Represents the sum of trade and other payables, financial liabilities at fair value through profit or loss, current portion of long-term borrowings, derivatives liabilities, current tax liabilities, provisions and other non-financial liabilities.

(6) Less discount on bonds of ₩7 billion, ₩6 billion and ₩10 billion as of December 31, 2019, 2020 and 2021, respectively.

(7) Represents the sum of financial liabilities at fair value through profit or loss, trade and other payables, long-term borrowings, derivatives liabilities, other non-financial liabilities, employee benefits liabilities and provisions.

(8) Represents the sum of share discount, other components of equity and retained earnings, minus non-controlling interests.

	As of and for the years ended December 31,			
	2019	2020	2021	
	(in billions of Won and millions of U.S. dollars, except percentages)[1]			
Selected Other Financial Data				
Depreciation and amortization	₩1,483	₩1,766	₩1,900	U.S.$1,603
Total debt/Total capitalization[2]	42.6%	43.2%	43.6%	43.6%
Capital expenditures[3]	₩3,864	₩4,775	₩5,414	U.S.$4,567

Notes:

(1) 2021 has been translated into U.S. dollars at the exchange rate of ₩1,185.5 to US$1.00, which was the Market Average Exchange Rate in effect as of December 31, 2021.

(2) Represents total debt divided by total capitalization. Total debt consists of borrowings and bonds. For details on borrowings and bonds, see Note 18 to the Issuer's consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021, which are included elsewhere in this Offering Memorandum. Total capitalization consists of total debt and total equity. The Issuer has included such metric because management believes it provides useful supplemental information as to the Issuer's capital structure.

(3) Represents capital expenditures consisting of cash used for acquisition of intangible assets.

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

The following discussion and analysis should be read in conjunction with, and is qualified in its entirety by reference to, the Issuer's consolidated financial statements and the notes thereto included elsewhere in this Offering Memorandum. Unless specified otherwise, all financial information set forth below is presented on a consolidated basis. The Issuer's consolidated financial statements have been prepared in accordance with the Government Accounting Standards, which mandates application of K-IFRS where specific accounting treatments are not prescribed by the Government Accounting Standards, which may differ in certain respects from IFRS applied in other countries. The following discussion contains forward-looking statements and reflects the Issuer's current view with respect to future events and financial performance. Actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors such as those set forth under "Risk Factors" and elsewhere in this Offering Memorandum.

Overview

The Issuer is a Government-owned corporation with the exclusive right to collect tolls on the expressways operated by it until it recovers all of its investments made in connection with the construction of such expressways. Formed as a public entity to execute the policies of the Government relating to the national expressways network, the Issuer does not seek to maximize profits but rather to maintain a certain level of cash flow and profitability with a view to strengthening its equity base and supporting its mandate of constructing, managing and operating expressways in Korea.

The Issuer derives its revenues from four business units: (i) toll business, which primarily involves the collection of tolls from motorists for the use of the expressways that the Issuer operates, (ii) construction business, which primarily involves construction of expressways to be operated by the Issuer upon completion, (iii) incidental business, which primarily involves leasing to third-party operators of service areas and gas stations located at various points along the expressways, technical consulting and research and development services with regard to road construction and maintenance and land acquisition services for land unrelated to expressways principally for third parties other than the Government, and (iv) supporting business, which primarily involves providing services to the Government (other than in relation to the construction and operation of expressways), including supervision of Government construction projects along various locations adjacent to the expressways and acquisition of land adjacent to or otherwise related to expressways on behalf of the Government.

The Issuer operates its supporting and construction businesses at cost and does not derive any gross profit from either of these businesses. As for the construction business, the consideration for such services is substantially matched to the costs and expenses incurred by the Issuer for such services on a percentage of completion basis and is recorded as construction-in-progress until completion of construction, which is then converted into expressway operating rights upon completion of construction. The cost of sales in relation to the revenue from the construction business is matched to the revenue from the construction business. See "– Critical Accounting Policies – Expressway Operating Rights; Amortization of Expressway Operating Rights." As for the supporting business, the Issuer states at cost the costs of providing its supporting services to or on behalf of the Government, which services primarily include acquiring land on behalf of the Government. The costs of such services principally involve the costs of land being acquired, and these costs are recognized as revenues for the supporting business in matching amounts. The cost of sales in relation to the supporting business is matched to the revenue from the supporting business.

Accordingly, the Issuer derives its operating profit principally from the toll business and, to a less extent, the incidental business. The Issuer's toll revenue depends mainly on the traffic volume and toll rates on the expressway network managed by the Issuer. In turn, traffic volume depends on a number of factors, some of which are beyond the Issuer's control. See "Business – Traffic." Increases in toll rates are subject to approval by the MOLIT, after consultation with the MOEF. The Issuer, the MOLIT and the MOEF consider various factors in determining toll rates, including the inflation levels in Korea, perceived and actual affordability of the toll rates to the general public, macroeconomic conditions and public policy considerations, as well as the Issuer's need to balance toll revenue with the Issuer's expenses. See "Relationship with the Government – Toll Rates." The Issuer's revenue from its toll business was ₩4,122 billion, ₩3,964 billion and ₩4,179 billion in 2019, 2020 and 2021, respectively, which represented 47.3%, 41.5% and 39.7% of the Issuer's revenues, or 85.7%, 85.7% and 82.7% of the Issuer's revenues other than from the construction and supporting businesses (which yield no gross profit as the Issuer operates these businesses at cost), in 2019, 2020 and 2021, respectively. Non-toll revenues (principally, those from the construction business and the supporting business) can fluctuate significantly from period to period depending on the amount of services required from the Issuer by the Government, over which the Issuer has no control.

The Issuer does not recognize any profit for the year from its toll business since the amount of amortization for expressway operating rights for a given financial year is determined so that the difference between the Issuer's revenues from and total expense for the toll business for such year is zero. Therefore, amortization of intangible assets (principally, the Issuer's exclusive expressway operating rights) for a given financial year serves as an indicator of the rate of the Issuer's recovery in respect of such year on its investments made for the construction of expressways operated by it. Such amortization amount effectively represents profit for the year from the Issuer's toll-related operations had there been no such amortization, and all of the Issuer's profit for the year is derived from the incidental business since, as discussed above, the construction business and the supporting business do not record any gross profit or profit for the year.

Accordingly, the Issuer's gross profit, operating profit and profit for the year and their respective margins are not as useful metrics for evaluating the Issuer's operating performance as would be the case for most companies.

See "– Critical Accounting Policies – Expressway Operating Rights; Amortization of Expressway Operating Rights" below and Note 2 to the Issuer's consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021, which are included elsewhere in this Offering Memorandum.

The level of financial support provided by the Government for the construction of expressways is critical to the financial performance of the Issuer since the Issuer is required to make up the shortfall between the actual construction costs and the Government's financial support with operating cash and debt financing from third party sources. The Government's financial support, which principally takes the form of periodic capital contributions by way of subscription of new shares in the Issuer, generally covered approximately 40% of the Issuer's total construction costs for both new expressways and expansions of existing expressways and, since 2003, 100% of the Issuer's budgeted cost of acquiring land on which to construct new expressways and expand existing expressways. However, at times, the Government's capital contribution may fall below such level due to budgetary constraints or other public policy considerations. For example, the Government's actual subsidy ratio (defined as the ratio of the Government's capital contributions to the Issuer's actual costs for construction of new expressways and expansions) fell below the 40% level in 2006, 2007, 2008 and 2010. The actual subsidy ratio was 49%, 45% and 49% in 2019, 2020 and 2021, respectively. In respect of 2022, the Issuer budgeted construction costs of ₩4,850 billion and the Government budgeted capital contributions to the Issuer in the amount of ₩2,396 billion. See "Relationship with the Government – Financial Support from the Government."

In addition to the Government's financial support, the Issuer has historically relied on cash from operations and debt financing to fund the development of expressways. See "– Liquidity and Capital Resources – Capital Resources" below.

Capital Reduction and Impairment Related to Investments in Privately Funded Expressway Projects

In addition to expressways constructed and managed by the Issuer, there are a limited number of expressways constructed and managed by private enterprises in Korea. See "Relationship with the Government – Government Road Construction Policy – Expressways funded by private capital." Initially, the Issuer was involved in the design and construction of five private expressway routes, but in the early 1990s, consistent with its overall strategy of stimulating growth in the private sector, the Government began encouraging direct participation by private enterprises in expressway projects. The Government undertook to provide financial support for five of these projects (namely, Incheon Airport Highway, Cheonan-Nonsan Expressway, the New Daegu-Busan Expressway, the Ilsan-Twegyewon Expressway, the Busan-Ulsan Expressway) by way of investments, but because no funds were directly earmarked in the Government budget for such investments, such investments were made indirectly through the Issuer, which funded such investments with capital contribution from the Government to the Issuer as well as funds independently raised by the Issuer from third party sources. For accounting purposes, the Issuer's investments in these projects were treated as assets and were initially reflected on the Issuer's consolidated statement of financial position under intangible assets under development.

While the Issuer recouped the portion of its investments in these projects provided in the form of debt financing, the Issuer has not been able to recoup the remainder of its investments made in the form of equity financing. The unrecouped portion of the Issuer's investments, which were made from 1993 to 2006, amounted to an aggregate of ₩868.7 billion (consisting of ₩606.1 billion sourced from the Government's capital contribution to the Issuer and ₩262.6 billion sourced from the Issuer's funding from third parties), which amount continued to remain on the Issuer's consolidated statement of financial position under intangible assets under development.

During the course of preparing the Issuer's separate financial statements as of and for the six months ended June 30, 2009, the Issuer requested the MOLIT to provide guidance on the method of recovering the Issuer's investments in private expressway projects in the amount of ₩868.7 billion and the expected timing of any such recovery. After consulting with the MOEF, which has the ultimate authority over financial and accounting issues involving Government corporations, the MOLIT informed the Issuer that, pursuant to a Government letter dated September 1, 2009, the Government intended to ensure the Issuer's recovery of its investment in private expressway projects by setting aside funds in the Government budget for that purpose or, if that proves to be infeasible, by securing ways for the Issuer to recover the investments in the private expressways in which it invested (such as allowing the Issuer to collect tolls).

However, during an audit in February and March 2011, the Board of Audit and Inspection of Korea (the "BAI") determined that the Issuer is unlikely to ever recover the unrecouped investment amount since the private investors (not the Issuer) have the statutory right to exclusively operate these highways for a concession term of 30 years; the Issuer therefore is unable, during the concession period, to recover its investment in these expressway projects by means of toll collection as would be the case for expressways where the Issuer has the exclusive operating right; and the Issuer's ability to recoup its investments after the 30-year concession period is currently uncertain. In tandem with such determination, the BAI requested that the Issuer write off the unrecouped investments from its statement of financial position by recording capital reduction in relation to the portion of unrecouped investments sourced from the Government's capital contribution to the Issuer and by recording impairment losses on intangible assets in relation to the portion of unrecouped investments sourced from the Issuer's debt financing from third parties for the current period. In compliance with such requests, the Issuer recognized capital reduction of ₩606.1 billion and impairments losses on intangible assets of ₩262.6 billion in its audited consolidated financial statements as of and for the year ended December 31, 2011.

Preparation of Financial Statements

Consolidated Financial Statements

The Issuer prepares and submits to the MOEF its consolidated financial statements annually. Although the Issuer currently is not required under Korean laws and regulations to prepare interim financial statements, the Issuer prepares semi-annual condensed consolidated financial statements.

As of December 31, 2021, the Issuer had two subsidiaries, Korea Expressway Corporation Facility Management Co., Ltd. ("KECFM") and Korea Expressway Corporation Service Co., Ltd. ("KECS"), that were consolidated under the Government Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea.

Under the Government Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea, the Issuer's investments in associates and joint ventures over which the Issuer exercises significant influence are accounted for in its consolidated financial statements using the equity method.

For a more detailed discussion of the Issuer's subsidiaries, associates and joint ventures, see "Business – Other Businesses – Subsidiaries, Affiliated Companies and Other Investments."

Critical Accounting Policies

The Issuer believes the accounting policies below are critical to its business operations and the understanding of the Issuer's financial condition and results of operations. The preparation of the Issuer's consolidated financial statements requires the Issuer to make difficult, complex and subjective judgments in selecting the appropriate estimates and assumptions that affect the amounts reported in its consolidated financial statements. By their nature, these judgments are subject to an inherent degree of uncertainty. These judgments are based on the Issuer's historical experience, terms of existing contracts, the Issuer's observation of trends in the industry and information available from other outside sources, as appropriate. While the Issuer believes its estimates and judgments to be reasonable under the circumstances, there can be no assurance that the Issuer's judgments will prove correct or that actual results reported in future periods will not differ from the Issuer's expectations reflected in its accounting treatment of certain items.

Expressway Operating Rights; Amortization of Expressway Operating Rights

The Issuer accounts for costs associated with construction of an expressway, such as road design, construction, land acquisition, improvements and any related financing costs, as intangible assets under development until the construction of such expressway is completed. Upon completion of such construction, the ownership of the expressway and related land are transferred to the Government and the corresponding amount of intangible assets under development is transferred to, and recorded as, expressway operating rights. The expressway operating rights, which involve the rights to collect tolls from users of the expressways managed by the Issuer, represent the Issuer's ability to recover not only the costs associated with construction of the expressways, but also expenditures for operation and maintenance of the expressways.

Upon completion of construction of an expressway, amortization of the expressway begins from the date toll revenue starts to be earned. Expressway operating rights are stated at construction cost (including capitalized interest for related financing cost), net of accumulated amortization. The amount of amortization expense for a particular year is determined so that the difference between the Issuer's total toll-related revenue for such year and the total toll-related expenses, including income tax expense, in the same year is zero. Therefore, such amortization amount effectively represents profit for the year from the Issuer's toll-related business had there been no such amortization, and all of the Issuer's profit for the year is derived from the incidental business since, as discussed above, the construction business and the supporting business do not record any gross profit or profit for the year. For the calculation of amortization expense, see Note 2 to the Issuer's consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021. For detailed operating segments revenue data, see Note 4 to the Issuer's consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021.

Results of Operations

The following table presents certain consolidated results of operations information for the years indicated.

	For the year ended December 31,		
	2019	**2020**	**2021**
	(in billions of Won, except percentages)		
Revenue	₩8,722	₩9,558	₩10,535
Cost of sales	7,201	8,612	9,585
Gross profit	1,521	945	950
Gross margin[1]	17.4%	9.9%	9.0%
Selling and administrative expenses	283	322	331
Operating profit	1,239	623	619
Operating margin[2]	14.2%	6.5%	5.9%
Other income	105	127	144
Other expenses	349	342	118
Other loss, net	(20)	(15)	(7)
Finance income	144	173	230
Finance costs	851	791	829
Gain (loss) related to associates and joint ventures	0	(3)	2
Profit (loss) before income tax	267	(228)	40
Income tax expense (benefit)	168	(255)	7
Profit for the year	₩100	₩27	₩34

2021 Compared to 2020

The following table presents revenues from the Issuer's four operating segments, such revenues as a percentage of revenue and their percentage changes from 2020 to 2021.

	For the year ended December 31,				
	2020		2021		
	Amount	**% of total**	**Amount**	**% of total**	**% Change**
	(in billions of Won, except percentages)				
Revenue:					
Toll business	₩3,964	41.5%	₩4,179	39.7%	5.4%
Construction business	4,608	48.2	5,239	49.7	13.7
Incidental business	662	6.9	871	8.3	31.6
Supporting business	324	3.4	246	2.3	(24.0)
Total	₩9,558	100%	₩10,535	100%	10.2%

(1) Represents gross profit divided by revenue.

(2) Represents operating profit divided by revenue.

The Issuer's revenue increased by 10.2% to ₩10,535 billion in 2021 from ₩9,558 billion in 2020 primarily due to an increase in revenue from the toll business and the construction business.

Revenue from toll business increased by 5.4% to ₩4,179 billion in 2021 from ₩3,964 billion in 2020, primarily due to an increase in traffic volume.

Revenue from incidental business increased by 31.6% to ₩871 billion in 2021 from ₩662 billion in 2020, primarily due to an increase in the operating profit of the national highway transportation center (as part of the Government's 'New Deal' policy and the Digital Social Overhead Capital (SOC), the Government will invest in the Intelligent Transport System (ITS) budget for large national highways until 2024).

The following table shows major components of the Issuer's cost of sales, the percentages of cost of sales represented by such components and their percentage changes from 2020 to 2021.

	For the year ended December 31,				
	2020		2021		
	Amount	% of total	Amount	% of total	% Change
	(in billions of Won, except percentages)				
Cost of Sales:					
Toll business	₩3,127	36.3%	₩3,332	34.8%	6.6%
Construction business	4,608	53.5	5,239	54.7	13.7
Incidental business	553	6.4	768	8.0	38.8
Supporting business	324	3.8	246	2.6	(24.0)
Total	₩8,612	100%	₩9,585	100%	11.3%

The Issuer's cost of sales increased by 11.3% to ₩9,585 billion in 2021 from ₩8,612 billion in 2020, primarily due to an increase in cost of sales as a result of an increase in the toll business and the construction business. Cost of sales relating to toll business increased by 6.6% to ₩3,332 billion in 2021 from ₩3,127 billion in 2020, primarily due to a 7.8% increase in amortization expense of expressway operating rights of ₩1,700 billion in 2021 from ₩1,576 billion in 2020. The increase in amortization expense is due to an increase in toll road amortization expense as a result of an increase in toll income. Cost of sales relating to incidental business increased by 38.8% to ₩768 billion in 2021 from ₩553 billion in 2020, primarily due to an increase in cost of sales with respect to service areas and other subsidiary businesses.

As a result of the foregoing factors, the Issuer's gross profit increased by 0.5% to ₩950 billion in 2021 from ₩945 billion in 2020, and the Issuer's gross profit margin (defined as gross profit divided by revenue) decreased to 9.0% in 2021 from 9.9% in 2020 primarily as a result of an increase in amortization expense with respect to expressway operating rights. As noted above, however, the Issuer's gross profit and gross profit margin are not useful indicators of measuring the Issuer's operating performance in light of the fact that amortization of expressway operating rights for the toll business is determined so that the toll business has profit for the year of zero as a matter of accounting policy and the arrangements with the government under which operating profits for the construction and supporting businesses are set to zero.

Selling and administrative expenses increased by 2.8% to ₩331 billion in 2021 from ₩322 billion in 2020, primarily as a result of an increase in salaries and employee welfares.

As a result of the foregoing factors, the Issuer's operating profit decreased by 0.7% to ₩619 billion in 2021 from ₩623 billion in 2020, and the Issuer's operating profit margin (defined as operating profit divided by revenue) decreased to 5.9% in 2021 from 6.5% in 2020. Also as noted above, the Issuer's operating profit and operating profit margin are not useful indicators of measuring the Issuer's operating performance in light of the fact that amortization of expressway operating rights for the toll business is determined so that the toll business has profit for the year of zero as a matter of accounting policy and the arrangements with the government under which operating profits for the construction and supporting businesses are set to zero. Operating profit from the toll business increased by 1.6% to ₩576 billion in 2021 from ₩567 billion in 2020, primarily due to an increase in amortization expense with respect to expressway operating rights which offset a decrease in overall toll business revenue. Operating profit from the incidental business decreased by 24.1% to ₩43 billion in 2021 from ₩56 billion in 2020, primarily due to decrease in lease payments from service areas. As for the supporting and construction businesses, as discussed above, the Issuer operates them at cost and does not derive any operating profit from either of these businesses.

Other income increased by 13.3% to ₩144 billion in 2021 from ₩127 billion in 2020, primarily due to the reversal of other provisions.

Net other loss decreased by 54.0% to ₩7 billion in 2021 from ₩15 billion in 2020, primarily due to an increase in gain on disposal of intangible assets. Gain on disposal of intangible assets increased by 109.0% to ₩11.7 billion in 2021 compared to ₩5.6 billion in 2020.

Net finance costs decreased by 3.1% to ₩599 billion in 2021 from ₩618 billion in 2020 primarily due to (i) an increase in loss on foreign currency translations by ₩165 billion in 2021 compared to 2020, and (ii) an increase in loss on foreign currency transactions by ₩16 billion in 2021 compared to 2020. During the construction phase of a project, interest expenses on the costs of construction are capitalized. The capitalized interest expense increases intangible assets under development and is expensed as cost of sales upon commencement of the operations of the project. Net interest expenses in 2020 and 2021 do not include ₩156 billion and ₩158 billion of interest expense capitalized as part of intangible assets under development in 2020 and 2021, respectively.

As a result of the foregoing factors, profit (loss) before income tax increased by 117.6% to ₩40 billion in 2021 from ₩(228) billion in 2020.

Income tax expense (benefit) increased by 102.4% to ₩6 billion in 2021 from ₩(255) billion in 2020 primarily due to profit before income tax incurred in 2021. The Issuer's average effective tax rate was 15% in 2021 and 12.07% in 2020.

As a result of the foregoing factors, the Issuer's profit for the year increased by 22.5% to ₩34 billion in 2021 from ₩27 billion in 2020.

2020 Compared to 2019

The following table presents revenues from the Issuer's four operating segments, such revenues as a percentage of revenue and their percentage changes from 2019 to 2020.

	For the year ended December 31,				
	2019		2020		
	Amount	% of total	Amount	% of total	% Change
	(in billions of Won, except percentages)				
Revenue:					
Toll business	₩4,122	47.3%	₩3,964	41.5%	(3.8)%
Construction business	3,739	42.9	4,608	48.2	23.2
Incidental business	688	7.9	662	6.9	(3.8)
Supporting business	173	2.0	324	3.4	87.0
Total	₩8,722	100%	₩9,558	100%	9.6%

The Issuer's revenue increased by 9.6% to ₩9,558 billion in 2020 from ₩8,722 billion in 2019 primarily due to an increase in revenue from the construction business as well as, to a lesser extent, a decrease in revenue from the toll businesses.

Revenue from toll business decreased by 3.8% to ₩3,964 billion in 2020 from ₩4,122 billion in 2019, primarily due to reduced traffic caused by COVID-19.

Revenue from incidental business decreased by 3.8% to ₩662 billion in 2020 from ₩688 billion in 2019, primarily due to a decrease in lease payments from service areas that are tied to revenues generated by the operators of such service areas and a decrease in sales of gasoline in the gas stations directly operated by the Issuer.

The following table shows major components of the Issuer's cost of sales, the percentages of cost of sales represented by such components and their percentage changes from 2019 to 2020.

	Year ended December 31,				
	2019		2020		
	Amount	% of total	Amount	% of total	% Change
	(in billions of Won, except percentages)				
Cost of Sales:					
Toll business	₩2,763	38.4%	₩3,127	36.3%	13.2%
Construction business	3,739	51.9	4,608	53.5	23.2
Incidental business	526	7.3	553	6.4	5.3
Supporting business	173	2.4	324	3.8	87.0
Total	₩7,201	100%	₩8,612	100%	19.6%

The Issuer's cost of sales increased by 19.6% to ₩8,612 billion in 2020 from ₩7,201 billion in 2019, primarily due to an increase in cost of sales relating to the construction and toll businesses. Cost of sales relating to toll business increased by 13.2% to ₩3,127 billion in 2020 from ₩2,763 billion in 2019, primarily due to a 21.1% increase in amortization expense of expressway operating rights of ₩1,576 billion in 2020 from ₩1,302 billion in 2019. The increase in amortization expense is due to the effect of corporate tax refund from a special tax exemption. Cost of sales relating to incidental business increased by 5.3% to ₩553 billion in 2020 from ₩526 billion in 2019, primarily due to an increase in cost of sales with respect to service areas and other subsidiary business.

As a result of the foregoing factors, the Issuer's gross profit decreased by 37.9% to ₩945 billion in 2020 from ₩1,521 billion in 2019, and the Issuer's gross profit margin (defined as gross profit divided by revenue) decreased to 9.9% in 2020 from 17.4% in 2019 primarily as a result of an increase in amortization expense with respect to expressway operating rights. As noted above, however, the Issuer's gross profit and gross profit margin are not useful indicators of measuring the Issuer's operating performance in light of the fact that amortization of expressway operating rights for the toll business is determined so that the toll business has profit for the year of zero as a matter of accounting policy and the arrangements with the government under which operating profits for the construction and supporting businesses are set to zero.

Selling and administrative expenses increased by 14.0% to ₩322 billion in 2020 from ₩283 billion in 2019, primarily as a result of an increase in taxes and dues.

As a result of the foregoing factors, the Issuer's operating profit decreased by 49.7% to ₩623 billion in 2020 from ₩1,239 billion in 2019, and the Issuer's operating profit margin (defined as operating profit divided by revenue) decreased to 6.5% in 2020 from 14.2% in 2019. Also as noted above, the Issuer's operating profit and operating profit margin are not useful indicators of measuring the Issuer's operating performance in light of the fact that amortization of expressway operating rights for the toll business is determined so that the toll business has profit for the year of zero as a matter of accounting policy and the arrangements with the government under which operating profits for the construction and supporting businesses are set to zero. Operating profit from the toll business decreased by 48.4% to ₩567 billion in 2020 from ₩1,098 billion in 2019, primarily due to an increase in amortization expense with respect to expressway operating rights and a decrease in toll business revenue. Operating profit from the incidental business decreased by 59.9% to ₩56 billion in 2020 from ₩141 billion in 2019, primarily due to decrease in lease payments from service areas. As for the supporting and construction businesses, as discussed above, the Issuer operates them at cost and does not derive any operating profit from either of these businesses.

Other income increased by 20.6% to ₩127 billion in 2020 from ₩105 billion in 2019, primarily due to the reversal of other provisions.

Net other loss decreased by 27.8% to ₩15 billion in 2020 from ₩20 billion in 2019, primarily due to an increase in net gain on disposal of intangible assets. Net gain on disposal of intangible assets increased by 38.5% to ₩5.6 billion in 2020 compared to ₩4.0 billion in 2019.

Net finance costs decreased by 12.6% to ₩618 billion in 2020 from ₩707 billion in 2019 primarily due to a decrease in interest expense from recent low-interest rate policies. During the construction phase of a project, interest expenses on the costs of construction are capitalized. The capitalized interest expense increases intangible assets under development and is expensed as cost of sales upon commencement of the operations of the project. Net interest expenses in 2019 and 2020 do not include ₩96 billion and ₩156 billion of interest expense capitalized as part of intangible assets under development in 2019 and 2020, respectively.

As a result of the foregoing factors, profit (loss) before income tax decreased by 185.2% to ₩(228) billion in 2020 from ₩267 billion in 2019.

Income tax expense (benefit) decreased by 252.3% to ₩(255) billion in 2020 from ₩168 billion in 2019 primarily due to the effect of corporate tax refund from a special tax exemption. The Issuer's average effective tax rate was 12.07% in 2020 and 21.25% in 2019.

As a result of the foregoing factors, the Issuer's profit for the year decreased by 72.4% to ₩27 billion in 2020 from ₩100 billion in 2019.

Liquidity and Capital Resources

Capital Requirements

The Issuer expects its working capital and other capital requirements to continue to increase as a result of its required capital investment in the construction and expansion of expressways pursuant to the National 10x10+6R[2] Plan. Ten to thirteen years generally elapse between the time the Government decides to construct a new expressway or expressway section and the day it actually opens for travel to the general public. The construction of an expressway involves a lengthy process in which the construction phase is relatively short (five to six years) compared with the project-planning phase (four to five years) and the consultation phase (one to two years), which involves detailed and comparative studies, including environmental studies and research and technical analysis, and meetings with environmental, business and local interest groups.

The Issuer anticipates that capital expenditures for the construction of new expressways and the expansion of existing expressways will be the most significant use of its funds for the next several years. The Issuer made capital expenditures (consisting of cash used for acquisition of intangible assets) of ₩3,864 billion, ₩4,775 billion and ₩5,414 billion in 2019, 2020 and 2021, respectively.

The following table presents the total capital expenditures of the Issuer for the years ended December 31, 2019, 2020 and 2021.

	For the year ended December 31,		
	2019	2020	2021
	(in billions of Won)		
Capital expenditure (consisting of cash used for acquisition of intangible assets)	₩3,864	₩4,775	₩5,414

In addition to funding requirements relating to the Issuer's capital investment program, payments of principal and interest on indebtedness require substantial capital resources. The Issuer believes that its debt obligation is the most significant contractual obligation of the Issuer considering the nature of its business. The scheduled maturities of the Issuer's outstanding total debt (consisting of borrowings and bonds), as of December 31, 2021, for the years ending December 31, 2022 through 2025 and thereafter are set forth in the table below.

Total	2022	2023	2024	2025 and thereafter
	(in billions of Won)			
₩30,971	₩3,327	₩3,395	₩2,666	₩21,583

The Issuer incurred interest expenses (excluding capitalized interest) of ₩723 billion, ₩626 billion and ₩602 billion in 2019, 2020 and 2021, respectively. The Issuer anticipates that interest expenses will not increase significantly in future years as existing high interest rate bonds expire and new borrowings are made at low interest rates. The Issuer also anticipates that the Government's capital contribution to the Issuer will not change significantly.

Total borrowings and bonds (consisting of current portion of long-term borrowings, current portion of bonds (less discount on bonds), long-term borrowings, bonds (less discount on bonds) and financial liabilities at fair value through profit or loss) as of December 31, 2019, 2020 and 2021 amounted to ₩26,973 billion, ₩28,913 billion and ₩30,971 billion respectively. As of December 31, 2021, ₩27,989 billion of the Issuer's total borrowings and bonds was denominated in Won, and the equivalent of ₩2,983 billion was denominated in foreign currencies, primarily U.S. dollars and Euro. See "– Market Risk – Foreign Exchange Risk."

Capital Resources

The Issuer has met its working capital and other capital requirements primarily from net cash provided by operating activities, capital contributions from the Government and the issuance of bonds and the incurrence of long-term borrowings. The Issuer intends to continue to rely primarily upon net cash provided by operating activities, capital contributions by the Government and additional borrowings for its working capital and other capital requirements.

The Issuer believes that its earnings from toll collection provide a stable source of cash flow. Net cash provided by operating activities amounted to ₩1,927 billion, ₩1,305 billion and ₩1,930 billion in 2019, 2020 and 2021, respectively. The Issuer's operating cash flows are primarily influenced by cash collected from the toll business, which is influenced by traffic volume using the expressways operated by the Issuer.

The Issuer's traffic volume was 1,660 million, 1,614 million and 1,698 million vehicles in 2019, 2020 and 2021, respectively. The increased number of toll gates and expressway routes has contributed to the increased traffic volume. Toll rate also affects cash generated from the toll business, and changes in toll rate are subject to the Government's approval. In addition, an increase in traffic volume also resulted in more usage of service areas which resulted in higher cash flows from lease revenues of service areas. However, cash flow from operations will not be sufficient to fund the significant capital resources required for the construction of the Issuer's expressway projects and to repay borrowings and accordingly, the Issuer will rely largely on capital contributions by the Government and additional borrowings for such requirements.

The Government's capital contributions generally covered approximately 40% of the Issuer's budgeted construction costs and, since 2003, 100% of the Issuer's budgeted costs of acquiring related land. However, at times, the Government's capital contribution may fall below such level due to budgetary constraints or other public policy considerations. For example, the Government's actual subsidy ratio (defined as the ratio of the Government's capital contributions to the Issuer's actual costs for construction of new expressways and expansions) fell below the 40% level in 2006, 2007, 2008 and 2010. The actual subsidy ratio was 49%, 45% and 49% in 2019, 2020 and 2021 respectively. In respect of 2022, the Issuer budgeted construction costs of ₩4,850 billion and the Government budgeted capital contributions to the Issuer in the amount of ₩2,396 billion. No assurance can be given that capital contributions from the Government will rise to or above the 40% level in future periods, especially if the Government were to experience similar or more severe budgetary constraints or if such capital contributions were to be assigned a lower priority in the Government's budget allocation process. If the Government's capital contributions decrease significantly, the Issuer will be required to resort to outside financing to fund a larger amount of its capital expenditure and working capital, which would increase the finance costs of the Issuer and adversely affect the Issuer's financial condition and results of operation. In addition, the amount of toll rate discounts and exemptions mandated as public service obligations under the Government's public policy objectives (including compact car discounts, commuter time discounts and loaded vehicle discounts) amounted to ₩397 billion, ₩375 billion and ₩346 billion in 2019, 2020 and 2021, respectively. If the Government's capital contributions decrease significantly or the Issuer's public service obligations increase significantly, the Issuer will be required to resort to outside financing to fund a larger amount of its capital expenditure and working capital, which would increase the net finance costs of the Issuer and adversely affect the Issuer's financial condition and results of operation.

The table below sets forth the total construction costs, Government's capital contributions and the resulting subsidy ratio, for the years indicated.

	For the year ended December 31,		
	2019	2020	2021
	(in billions of Won, except percentages)		
Construction of new expressways and expansions	₩2,507	₩2,997	₩3,661
Government's capital contributions	1,204	1,448	1,662
Actual subsidy ratio(1)	49%	45%	49%

Note:

(1) Actual subsidy ratio is determined by dividing "Government's capital contributions" by "Construction of new expressways and expansions."

The Issuer incurred ₩3,910 billion, ₩4,965 billion and ₩5,031 billion of proceeds from long-term borrowings and proceeds from bonds in 2019, 2020 and 2021, respectively. As of December 31, 2021, the Issuer's long-term debt (including the current portion thereof and before taking into account the effect of hedging transactions) as a percentage of total equity was 77.2%. The Issuer issued bonds on 95 different occasions between December 31, 2019 and December 31, 2021, in the aggregate amount of ₩13,406 billion, with maturities of 1 to 30 years and with fixed and floating interest rates. The Issuer maintains a credit facility of ₩1,600 billion from domestic financial institutions.

The Issuer's total equity increased from ₩36,328 billion as of December 31, 2019 to ₩38,022 billion as of December 31, 2020 and ₩40,119 billion as of December 31, 2021.

Liquidity

Substantially all of the Issuer's revenue is denominated in Won. As of December 31, 2021, 9.6% of the Issuer's long-term borrowings and bonds (including the current portion of long-term borrowings and bonds and before taking into account the effect of hedging transactions) was denominated in currencies other than Won and primarily consisted of notes denominated in U.S. dollars. The Issuer intends to continue to obtain a portion of its required funding through long-term foreign currency borrowings.

The Issuer incurs significant amounts of indebtedness in order to fund its capital expenditures and to pay interest and principal on its existing indebtedness. Considerable capital expenditures are required for most expressway projects during the construction period. Since it generally takes several years for a project to be completed and to start generating revenue, if the Issuer is unable to obtain debt financing timely and on commercially acceptable terms, the Issuer may be subject to significant liquidity risk.

The Issuer's liquidity is also substantially affected by its construction expenditures. Intangible assets under development amounted to ₩8,506 billion, ₩10,264 billion and ₩14,864 billion as of December 31, 2019, 2020 and 2021, respectively.

The Issuer's working capital deficit (current liabilities in excess of current assets) was ₩2,996 billion, ₩3,121 billion and ₩3,212 billion as of December 31, 2019, 2020 and 2021, respectively. The Issuer has traditionally operated with a working capital deficit, and the Issuer contemplates that it will continue to experience substantial working capital deficits in the future.

To address any potential liquidity risk, the Issuer may refinance its existing debt, decrease its construction expenditures by delaying construction schedules or continue to utilize the existing ₩1,600 billion credit line commitments extended by domestic financial institutions.

Inflation

Historically, toll rates have increased at a rate below inflation. See "Business – Tolls." The effects of inflation in Korea on the Issuer's financial condition and results of operations are reflected primarily in construction costs as well as in labor expenses. Inflation in Korea has not had a significant impact on the Issuer's results of operations in recent years. It is possible that inflation in the future may have a material adverse effect on the Issuer's financial condition or results of operations.

Effects of Interest Rate and Foreign Exchange Movements on the Issuer's Borrowings

As a result of additional borrowings to finance the expressways currently under development and those that are expected to be constructed in the future and other capital requirements, the Issuer's interest and finance charges are expected to increase in the future. An increase in interest rates and, to a lesser extent, higher volatility in currency exchange rates between the Korean Won and other currencies – the Japanese Yen, United States dollars and Euros in particular – may increase the Issuer's borrowing costs and therefore adversely affect the Issuer's results of operations and financial condition. However, the Issuer seeks to limit its exposure to floating interest rate risk by maintaining at least 85% of the total principal amount of its debt obligations at a fixed interest rate for the duration of the debt obligations, regardless of maturity. The Issuer's policy is to use derivative instruments only for hedging purposes and not for speculative purposes.

All of the Issuer's revenue and operating expenses are incurred in Korean Won. In addition, all of the capital expenditures for the Issuer's expressway construction are incurred in Korean Won. If market conditions permit, the Issuer expects to continue to obtain a certain portion of its borrowings in foreign currencies to diversify its funding sources. The Issuer, however, seeks to eliminate its foreign exchange exposure relating to foreign currency debt obligations by entering into currency swap agreements with major domestic and international financial institutions.

Market Risk

The Issuer's primary market risk exposure is fluctuations in interest rates and foreign exchange rates. For a discussion of additional market risks and other risks such as country risk, credit risk and legal risk, see "Risk Factors" and "– Liquidity and Capital Resources – Liquidity."

In order to minimize financial risk and closely monitor financial market movements, the Issuer uses Earnings-at-Risk ("EaR") based risk management system. The EaR system measures the impact on the Issuer's earnings during the portfolio holding period of one to twelve months at a 95% confidence level from the changes in interest rates. The Issuer's risk management system produces the EaRs by monitoring various financial market data and the Issuer's financial status, which are then compared to the Issuer's established limits. The Issuer takes necessary measures based on such analysis.

Interest Rate Risk

The Issuer is exposed to certain interest rate risk due to the outstanding amounts of floating rate debt and refinancing risk of current portion of long-term debt. An increase in interest rates increases the cost of outstanding floating rate borrowings and refinancing cost of current portion of long-term debt. ₩360 million, or 1% of the Issuer's long-term debt (including borrowings and bonds), are exposed to floating interest risk as of December 31, 2021. In 2021, the Issuer's weighted average rate of interest was 2.45%.

To minimize interest rate risk, the Issuer has obtained long-term debt with fixed interest rates or swapped floating interest rate debts into fixed rate debts via interest rate derivative instruments, which carry relatively higher yields for lenders. The Issuer's policy is to hold or issue interest rate derivative instruments for hedging purposes and not for speculative purposes. The Issuer's derivative instruments are entered into with major domestic and international financial institutions. The Issuer makes efforts to balance its interest rate exposure versus its financing cost by taking into account the level of its fixed and floating interest rate borrowings. The Issuer's current policy is to maintain fixed rate long-term borrowings with a maturity of over five years in the range of approximately 85% to 95% of its total long-term borrowings.

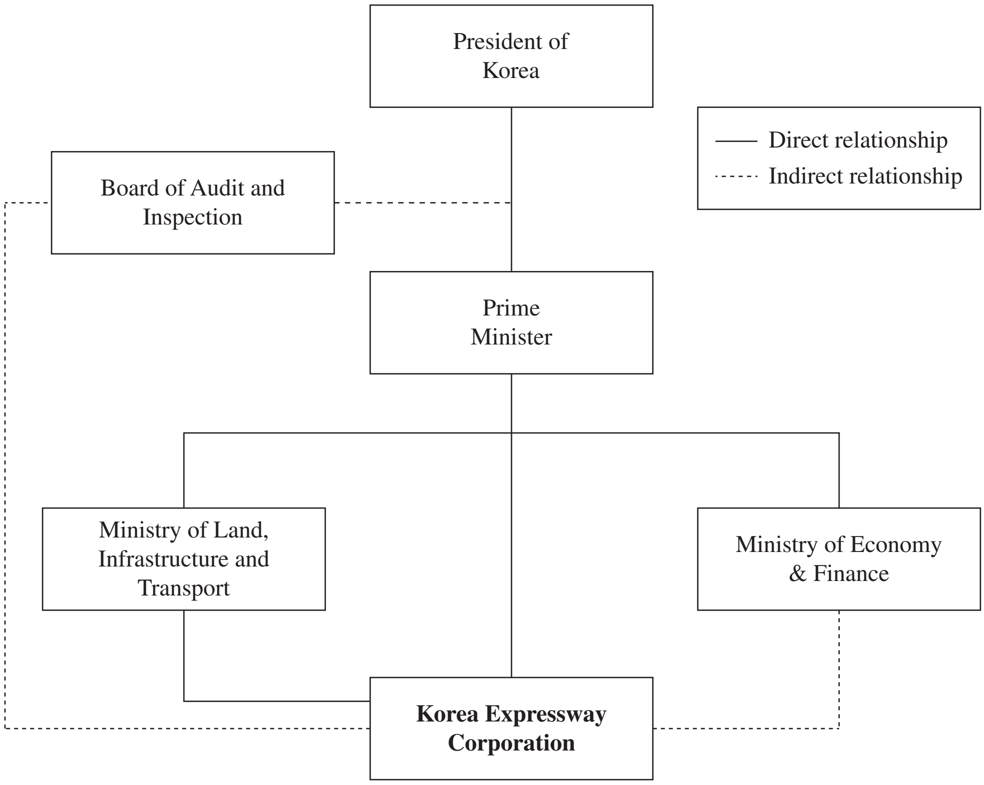
Foreign Exchange Risk

The Issuer is exposed to foreign currency related risk. For details on the Issuer's foreign currency-denominated debt, see Note 38(4) to the Issuer's audited consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021. In order to eliminate substantially all of its foreign exchange fluctuation risk, the Issuer hedged all its existing foreign currency-denominated debt obligations against the Korean Won using derivative instruments.

RELATIONSHIP WITH THE GOVERNMENT

Government Control and Ownership

The Issuer was established by the Government under the KEC Act. The Government is the primary regulator and owns, directly and indirectly, substantially all of the shares of the Issuer and, as such, exerts significant influence on the Issuer's operations. The President of Korea appoints the Issuer's president and standing member of the audit committee. The president of the Issuer selects the standing directors and the MOEF selects the non-standing directors. See "Management – Compensation of Directors and Executive Officers." In addition, the Issuer works with the Government, in particular with the MOLIT and the MOEF, in implementing policies relating to the nation's expressway transportation network.



The chart below illustrates the supervisory structure of the Issuer.

The Issuer has been empowered by the MOLIT to develop, manage and operate expressways under a series of laws which lay out the foundations of the regulatory regime that governs all road-related matters in the Republic. For example, Article 112 of the Road Act and Article 103 of the Enforcement Decree thereunder allow the Issuer, acting under the MOLIT's guidance and supervision for all expressway-related matters, to execute the construction and management of Korea's expressways as mandated by the MOLIT. See "Regulation." The MOLIT is responsible for the administration, planning, design, construction and maintenance of all of Korea's expressways under Article 23 of the Road Act. The Issuer is under the direct supervision of the MOLIT's Road Policy Division, the central agency at the MOLIT which formulates all policies related to roads and reviews and coordinates plans prepared by various agencies. In addition, based on the Act on the Management of Public Institutions, the MOLIT is responsible for overseeing the establishment of the Issuer's operational objectives, monitoring its operational and financial performance, overseeing its budgeting and approving revisions to its operating plans. Under the KEC Act, the MOLIT also approves the development of areas adjacent to expressways and approves and monitors funding plans, bond issuances and debt management.

The MOEF is responsible for the review of the financial results of the Issuer and also supervises matters concerning the compliance by the Issuer with the management guidelines set by the Government, including determination and approval of any toll rate increase in line with inflation and other economic targets of the Government. See "– Toll Rates" below.

Based on the Act on the Management of Public Institutions, which governs all public institutions in which the Government has an ownership of 50% or more of the outstanding common stock or which are prescribed in Article 4(1) of the Act on the Management of Public Institutions, including the Issuer, the MOEF is responsible for overseeing the revision of operational objectives, actual results of operations, budgeting and operating plans. The Steering Committee of Public Institutions ("Steering Committee") of the MOEF is responsible for evaluating operating results and financial performance of the Issuer and matters related to the management, such as recommending the removal of the Issuer's president or standing directors to the President and the MOLIT, respectively, and the appointment and removal of non-standing directors.

The BAI, an independent government agency that audits all governmental agencies and government-controlled entities such as the Issuer, reviews the Issuer's budget, audits its financial statements and conducts an annual business audit. The BAI reports directly to the President of Korea. Further, the budget of the Issuer is reported to the MOEF, the BAI and the MOLIT. The actual performance of the Issuer is reported to the National Assembly of Korea, the MOEF and the MOLIT.

The BAI also inspects the Issuer's business and affairs. Under the Board of Audit and Inspection Act and the Public Audit and Inspection Criteria issued by the BAI, if the BAI's audit and inspection of the Issuer discloses any matter which the BAI deems to be illegal or improper, the BAI may issue a notice or request for attention or request certain corrective measures to be taken, including compensation, disciplinary punishment, correction or improvement. The Issuer has in the past taken, and intends to take, such measures as it deems appropriate to address any concerns raised, or which may be raised, by the BAI in its periodic reports. If the BAI finds that the Issuer's response to the findings in a BAI report is insufficient or inadequate, the BAI may issue similar or further requests or take other actions. Private third parties may also bring claims against the Issuer if they were damaged by any of the matters pointed out by the BAI, in which case a BAI report could be used as evidence in support of their claims.

The Issuer is also subject to inspection and investigation by the National Assembly according to the Act on Inspection and Investigation of Government Administration of 1988, as amended.

As of December 31, 2021, approximately 99.9% of the share capital of the Issuer was owned by the Government, with 87.77% held directly and 12.14% held indirectly through The Export-Import Bank of Korea, The Korea Development Bank, Korea Asset Management Corporation and Korea Housing Financing Corporation, all of which were wholly (or, in the case of Korea Asset Management Corporation, approximately 92%) owned (directly or indirectly) by the Government.

The Government is required under Article 4 of the KEC Act to maintain a minimum ownership percentage in the Issuer of not less than 50% of the outstanding common shares. Privatization of the Issuer can occur only after passage of an act amending relevant articles of the KEC Act by the National Assembly. The Issuer believes that privatization of the Issuer is unlikely to occur in the near future and expects the Government will remain the Issuer's largest shareholder for the foreseeable future.

On occasion, the Issuer may be requested to take action in furtherance of public policy considerations and the Government's broader objectives relating to the nation's transportation network, which may not necessarily be in the Issuer's best commercial interests. The Issuer cannot make any assurances that future policy decisions by the Government will not have a material adverse effect on the Issuer's results of operations and financial condition.

Financial Support from the Government

The Issuer finances the development of expressway projects through a combination of capital contributions from the Government, debt financing and cash flow from operations. See "Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources."

Since the Issuer has been mandated by the Government to construct and maintain Korea's expressways, the Government, through the MOLIT, provides substantial financial support to the Issuer for all of its expressway-related projects although there is no specific law or regulation requiring the Government to provide any such support. The Government's financial support generally takes the form of capital contributions (namely, subscriptions of new shares in the Issuer), the proceeds of which are then used to defray the Issuer's costs incurred for the construction of expressways and acquisition of related land.

The Government determines the amounts of its capital contributions to the Issuer at the beginning of the fiscal year based on the Issuer's estimated budget for total construction and land acquisitions for such year. The Government's capital contributions generally covered approximately 40% of the Issuer's budgeted construction costs and, since 2003, 100% of the Issuer's budgeted costs of acquiring related land. However, at times, the Government's capital contribution may fall below such level due to budgetary constraints or other public policy considerations. For example, the Government's actual subsidy ratio (defined as the ratio of the Government's capital contributions to the Issuer's actual costs for construction of new expressways and expansions) fell below the 40% level in 2006, 2007, 2008 and 2010. The actual subsidy ratio was 49%, 45% and 49% in 2019, 2020 and 2021 respectively. In respect of 2022, the Issuer budgeted construction costs of ₩4,850 billion and the Government budgeted capital contributions to the Issuer in the amount of ₩2,396 billion.

Since funding the Issuer's initial paid-in capital of ₩22 billion in 1969, the total amount of capital contributions made since then from the Government amounted to ₩33,929 billion as of December 31, 2021. The Issuer's share capital as of December 31, 2021 was ₩38,656 billion. Since the Government determines the amounts of capital contributions to the Issuer as part of the Government's overall national budgeting process, there is no assurance that such capital contributions will not decrease substantially in the future due to the Government's budgetary constraints or other public policy considerations.

According to the KEC Act, the Government may support some of the Issuer's business expenses, provide loans for financing or subscribe for corporate bonds issued by the Issuer within the limits of the national budget. In addition, the Government is required to reimburse the Issuer for any new construction or maintenance expenses for expressways that do not impose toll fees. Moreover, if the Issuer issues corporate bonds or borrows money, the Government may guarantee the repayment of the principal and interest on such bond or loan, although the Government is under no obligation to do so and has to-date not provided any such guarantees.

Toll Rates

The Issuer submits proposals for toll rate increases to the Government, which are set by the MOLIT upon consultation with the MOEF and representatives of consumers and workers. See "Business – Tolls."

Toll rates are determined based upon the total cost needed to provide transportation services to expressway users and is subject to the approval of the MOLIT. An increase in toll rates is subject to the following steps:

(1) The Issuer follows a precise set of guidelines issued by the MOLIT in preparing a proposal for toll adjustment, taking into account, among other things, its cash flow projections and estimated capital expenditures.

(2) The Issuer submits the proposal to its board of directors for approval, pursuant to the articles of incorporation of the Issuer.

(3) Upon approval by the board of directors of the Issuer, the Issuer submits the proposal to the MOLIT.

(4) The MOLIT, in consultation with the MOEF, considers the proposal, taking into consideration the national budget, financial status of the Issuer and comparison with other utility prices.

(5) The Road Policy Division of the MOLIT considers the proposal in consultation with representative consumers and workers.

(6) Upon approval by the Road Policy Division of the MOLIT, an official announcement is made in the official gazette or the newspapers.

(7) The new toll rates are implemented.

Government Road Construction Policy

The National Arterial Expressway Network Plan

The basic framework under which the Government has formulated its road construction policy is based on the following policy objectives: (i) seek balanced regional development through balanced national land use; (ii) maximize convenience in road use and diversify route options for motorists through establishing a road network system that addresses the traffic growth in the country; and (iii) promote industrial competitiveness and reduce traffic congestions by providing linkage among major cities, large-scale industrial complexes, harbors and ports.

In furtherance of the above objectives, the MOLIT, on behalf of the Government, announced in 1991 the National 7x9 Plan (subsequently amended to the National 7x9+6R Plan and currently the National 10x10+6R Plan), which is a master road-development plan under the National Arterial Expressway Network Plan and is designed to provide the country with a grid-lock expressway network of 7,783 kilometers. When completed, this network of expressways is expected to consist of ten roads running north and south, ten roads running east and west and six ring-shaped beltways encircling major cities. Once completed, the network of expressways is expected to provide access to an expressway from anywhere in Korea within 30 minutes. In addition, the 10x10+6R^2 arterial grid network is designed to establish a radial or circular road network system to decentralize the passing traffic between regions through the construction of circular expressways around large cities. 65.8% of the National 10x10+6R^2 Plan, in terms of route kilometers, was completed as of December 31, 2021.

Expressways funded by private capital

In addition to the expressways constructed and managed by the Issuer, there are a limited number of expressways constructed and managed by private enterprises in Korea. The Act on Private Participation in Infrastructure of 1998, as amended, encourages private enterprises to invest in infrastructure projects, such as construction of roads. Currently, 24 projects have been approved by the MOLIT for development by private enterprises. Of these 24 projects, 20 have started commercial operations, namely the Incheon Airport Highway, the Cheonan-Nonsan Expressway, the New Daegu-Busan Expressway, the Ilsan-Twegyewon Expressway, the Busan-Ulsan Expressway, the Seoul-Chuncheon Expressway, the Yongin-Seoul Expressway, the Incheon Bridge, the West Suwon-Pyeongtaek Expressway, the Pyeongtaek-Siheung Expressway, the Suwon-Kwangmyeong Expressway, the Kwangju-Wonju Expressway, the Busan New

Port the second road behind, the Incheon-Gimpo Expressway, the Sangju-Yeongcheon Expressway, the Guri-Pocheon Expressway, the the Anyang-Seongnam Expressway, the Oksan-Ochang Expressway, the Seoul Munsan Expressway and the Bongdam-Songsan Expressway. These privately managed expressways are feeder roads supplementing the main expressways constructed and managed by the Issuer. As of December 31, 2021, expressways constructed and managed by private enterprises in Korea had total length of 670 kilometers, with 218 kilometers over four routes currently under construction.

The MOEF sets the size of the private investment projects and the MOLIT submits the plans for the projects. The selection of a contractor is made by the MOLIT after an open bidding process. The selected contractor is generally a consortium of several companies, as the construction of an expressway requires considerable capital. Once selected, the contractor is responsible for raising the capital necessary for the project. The period for toll collection rights is agreed between the contractor and the MOLIT. The contractor's right to collect tolls on the expressway that it has constructed terminates upon the expiration of the negotiated toll collection period.

The expressways funded by private capital are funded mainly through equity participation (including by the Issuer) and debt financing. The table below sets forth the Issuer's equity interest and capital contributions in operators of such expressways as of December 31, 2021.

Expressway	**Operator**	**Issuer's equity interest**	**Issuer's capital contribution**	**Status of construction**
Busan-Ulsan Expressway.	Busan-Ulsan Expressway Co., Ltd.	51%	Won25 billion	Completed in 2008
Seoul-Chuncheon Expressway.	Seoul-Chuncheon Expressway Corporation	10%	Won10 billion	Completed in 2009
2nd Seoul-Incheon Linking Highway	2nd Seoul-Incheon Linking Highway Co., Ltd.	4.76%	Won8 billion	Completed in 2017
Guri-Pocheon Expressway.	Seoul Northern Highway Corporation	10%	Won24 billion	Completed in 2017

The Issuer may opportunistically participate in other expressways funded by private capital in the future, subject to availability of funding for and estimated profitability of such projects.

From 1993 to 2006, the Issuer, at the request of the Government, made investments in five expressway construction and operation projects involving private investors. For these projects, the Issuer had not been able to fully recoup its investments and recently recognized capital reduction and impairment losses on intangibles. See "Management's Discussion and Analysis of Financial Condition and Results of Operations – Capital Reduction and Impairment Related to Investments in Privately Funded Expressway Projects."

BUSINESS

Overview

The Issuer is a Government-owned corporation established by the KEC Act to develop, manage and operate the nation's expressway network. Under the KEC Act, the Issuer is also mandated to develop areas adjacent to expressways and to conduct research and development relating to expressways. The Issuer has the exclusive right to operate and collect tolls on 4,196 kilometers of expressways in Korea, which represented approximately 86.2% of the total kilometers of expressways in Korea as of December 31, 2021. The network under the Issuer's supervision comprises of 33 routes throughout Korea and includes Korea's major road arteries that connect Korea's most populated metropolitan areas, including Seoul, Busan, Incheon, Daegu, Daejeon, Gwangju and Ulsan. As of December 31, 2021, the Issuer operated 356 toll plazas.

The principal source of income for the Issuer is tolls collected from motorists for the use of the expressways managed by the Issuer. The Issuer also receives lease payments from operators of service areas and gas stations located at various points along the expressways. In addition, the Issuer provides, at cost, road construction services (including supervision of Government construction projects along various locations adjacent to expressways) and supporting services (including the purchase and sale on behalf of the Government of land related to expressways) to the Government. The Issuer's revenue from its toll business was ₩4,122 billion, ₩3,964 billion and ₩4,179 billion in 2019, 2020 and 2021, respectively, which represented 47.3%, 41.5% and 39.7% of the Issuer's revenues, or 85.7%, 85.7% and 82.7% of the Issuer's revenues other than from the construction and supporting businesses (which yield no gross profit as the Issuer operates these businesses at cost), in 2019, 2020 and 2021, respectively. Toll revenues are largely dependent on the total traffic volume on the expressways managed by the Issuer, which was 1,660 million, 1,614 million and 1,698 million vehicles in 2019, 2020 and 2021, respectively, while the total registered vehicles in Korea were 24 million, 24 million and 25 million as of December 31, 2019, 2020 and 2021, respectively, according to the Korea National Statistical Office. See "Business – Traffic."

The Government's mandate for the Issuer includes implementation of the Government's National Arterial Expressway Network Plan, adopted in 1991, which sets forth a plan for the construction of Korea's national expressway network. A key component of this plan was the National 7x9+6R Plan, which contemplated construction of 7,331 kilometers of expressways throughout Korea in the form of a grid comprised of seven south-to-north expressways, nine east-to-west expressways and six ring-shaped beltways encircling major cities. This plan was changed to the current National $10x10+6R^2$ Plan, which was adopted in 2020 with a target completion timeline of 2030. The National $10x10+6R^2$ Plan contemplates construction of 7,783 kilometers of expressways throughout Korea in the form of a grid comprised of ten south-to-north expressways, ten east-to-west expressways and six ring-shaped beltways encircling major cities. 65.8% of the National $10x10+6R^2$ Plan, in terms of route kilometers, was completed as of December 31, 2021. As of December 31, 2021, the Issuer had 18 new expressway routes under construction for an aggregate length of 521.7 kilometers and 3 expressway routes under expansion for an aggregate length of 26.3 kilometers.

In light of its mandate to the Issuer, the Government provides substantial financial support to the Issuer for all of its expressway-related projects by way of periodic capital contributions, which is used to defray a substantial portion of the Issuer's costs incurred in the construction of the expressways contemplated in the National $10x10+6R^2$ Plan, as well as all of the Issuer's costs incurred in the acquisition of related land. Capital increase by issuing new shares from subscription by the Government in the Issuer amounted to ₩1,448 billion, ₩1,662 billion and ₩2,057 billion in 2019, 2020 and 2021, respectively. With respect to 2022, the Government has budgeted ₩2,396 billion for capital contribution to the Issuer. The Government's capital contribution is generally set at a level to cover approximately 40% of the Issuer's budgeted construction costs and, since 2003, 100% of the Issuer's budgeted costs of acquiring related land. However, at times, the Government's capital contribution may fall below such level due to budgetary constraints or other public policy considerations. For example, the Government's actual subsidy ratio (defined as the ratio of the Government's capital contributions to the Issuer's actual costs for construction of new expressways and expansions) fell below the 40% level in 2006, 2007, 2008 and 2010. The actual subsidy ratio was 49%, 45% and 49% in 2019, 2020 and 2021, respectively. In respect of 2022, the Issuer budgeted construction costs of ₩4,850 billion and the Government budgeted capital contributions to the Issuer in the amount of ₩2,396 billion. See "Relationship with the Government – Financial Support from the Government."

As of December 31, 2021, approximately 99.9% of the share capital of the Issuer was owned by the Government, with 87.77% held directly and 12.14% held indirectly through The Export-Import Bank of Korea, The Korea Development Bank, Korea Asset Management Corporation and Korea Housing Financing Corporation, all of which were wholly (or, in the case of Korea Asset Management Corporation, approximately 92%) owned (directly or indirectly) by the Government.

The Issuer seeks to improve its overall financial position and capital structure. The Issuer's current funding strategy is to match the cash flow generated from borrowings more closely with anticipated capital expenditures, diversify funding sources and reduce financing costs. In addition, the Issuer has sought, and will continue to seek, increases in toll rates and increases in funding from the Government.

As of December 31, 2021, the Issuer had 8,523 full-time employees, of whom 75.2% were engineers, 22.3% were operations staff and 2.5% were administrative staff.

The Issuer was established in 1969. In 2007, the Issuer changed its English name from "Korea Highway Corporation" to "Korea Expressway Corporation." The Issuer's registered office is 77, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, Korea.

Expressways Under Management, Construction and Expansion

Operation of Expressways

As of December 31, 2021, the Issuer operated an expressway network comprised of 33 routes, extending 4,196 kilometers. This network connects Korea's most populated metropolitan areas, including Seoul, Busan, Incheon, Daegu, Daejon, Gwangju and Ulsan, which are Korea's largest commercial and industrial cities.

The table below presents certain information with respect to the ten key expressways operated by the Issuer, which in the aggregate accounted for 79.4% of the Issuer's toll revenue in 2021.

	Length	2021 Revenue	Percentage of Toll Revenue	2021 Average Daily traffic	Commencement of Operations[(1)]
	(km)	(in billions of Won)	(%)	(in thousands)	
Gyeongbu Expressway.	415.3	963	23.1	766	1968-1970
Youngdong Expressway	234.4	356	8.5	321	1971-2001
Seohaean Expressway	336.6	314	7.5	275	1994-2001
Jungbu Expressway	332.5	309	7.4	301	1987-2005
Namhae Expressway	273.2	297	7.1	265	1973-2012
Jungbu Inland Expressway . .	302	290	7	101	1977-2012
Sudokwon Jeil Sunhwan Expressway	91.7	248	5.9	911	1991-1999
Joongang Expressway	288.7	208	5	307	1995-2001
Honam Expressway	194.2	146	3.5	189	1970-1973
Dangjin-Youngduk Expressway	278.9	187	4.5	72	2007-2016

The Issuer has the exclusive right to collect tolls from motorists using the expressways operated by the Issuer. As of December 31, 2021, the Issuer operated 356 toll plazas. The Issuer's revenue from its toll business was ₩4,122 billion, ₩3,964 billion and ₩4,179 billion in 2019, 2020 and 2021, respectively, which represented 47.3%, 41.5% and 39.7% of the Issuer's revenues, or 85.7%, 85.7% and 82.7% of the Issuer's revenues other than from the construction and supporting businesses (which yield no gross profit as the Issuer operates these businesses at cost), in 2019, 2020 and 2021, respectively. Toll revenues are largely dependent on the total traffic volume on the expressways managed by the Issuer, which was 1,660 million, 1,614 million and 1,698 million vehicles in 2019, 2020 and 2021, respectively, while the total registered vehicles in Korea were 24 million, 24 million and 25 million as of December 31, 2019, 2020 and 2021, respectively, according to the Korea National Statistical Office. See "– Traffic." Approximately 90.4% of the vehicles using the expressway network operated by the Issuer in 2021 were passenger cars, representing 84.3% of the Issuer's toll revenue in 2021.

Construction and Expansion

Since its establishment, the Issuer has supervised the construction of 4,037 kilometers of expressways. As of December 31, 2021, the Issuer had 18 new expressway routes under construction for an aggregate length of 521.7 kilometers and 3 expressway routes under expansion for an aggregate length of 26.3 kilometers. Under the 10x10+6R^2 Plan, an additional 1,987 kilometers of expressway remain to be built. According to internal estimates, the average cost per kilometer to the Issuer of constructing new expressways was approximately ₩481 billion as of December 31, 2021.

Construction Approval Process

Ten to thirteen years generally elapse between the time the Government decides to construct a new expressway or expressway section and the day such expressway is open for the general public to travel. The construction of an expressway involves several steps, including the commissioning of feasibility studies, which takes between one to two years, preparation of master plans and blue prints for construction, which takes between four to five years, and finally, the actual construction of the expressway, which takes between five to six years. During the feasibility study stage, detailed and comparative studies of various alternative locations for constructing the expressways are conducted. Environmental studies and research and technical analysis, and analysis of traffic flows are also conducted. During the master plan and blueprint stages, various meetings with environmental, business and local interest groups are held to identify their concerns. These meetings allow the Issuer to address the concerns of the community before commencing construction. The Issuer is responsible for preparing the master plan and the blueprints.

The Issuer must also locate and purchase, on behalf of the Government, the land for the proposed expressway, including obtaining any rights of way over private land as well as exercising the right to eminent domain on behalf of the Government. Since 2003, the Government generally provided for 100% of the Issuer's land acquisition costs. While the Issuer acquires the land, title is recorded in the name of the Government and the Issuer records the cost of the acquisition as a part of construction-in-progress and obtains expressway operating rights from the Government upon completion the construction of the expressway.

The Issuer acts as project manager for the construction of a certain section of an expressway and the Issuer uses a general contractor selected through a competitive bidding process to serve as the construction supervisor for that project. The Issuer selects the general contractor for a particular construction project based upon an open, competitive bid process, after taking into account the proposed contractor's experience with such projects, the cost proposal, prior successful projects completed on behalf of the Issuer by such contractor, safety record and quality, among other factors. Once selected, the contractor is responsible for the project as a whole, including the engagement of any subcontractors. The Issuer's construction offices are responsible for monitoring the construction of the sections of the expressway falling within their respective jurisdictions.

Construction of New Expressways

New expressways are constructed in accordance with policy initiatives of the MOLIT, which takes into account annual budgets and directives established by the Government. The Issuer invested ₩2,936 billion, ₩3,650 billion and ₩4,070 billion in 2019, 2020 and 2021, respectively and has budgeted ₩4,677 billion for 2022. As of December 31, the Issuer had 521.7 kilometers of new expressways under construction, comprising of 18 routes.

Expansion of Existing Expressways

Pursuant to the National Arterial Expressway Network Plan, the Issuer improves the expressway network under its management and regularly invests in enhancing the quality of the services it offers. To improve traffic flow, the Issuer widens sections of the expressways, and constructs new interchanges, where traffic is often congested. The Issuer's capital expenditures (consisting of cash used for acquisition of intangible assets) for 2019, 2020 and 2021 were ₩3,864 billion, ₩4,775 billion and ₩5,414 billion respectively. As of December 31, 2021, the Issuer had 26.3 kilometers of expressways under expansion, comprising of 3 routes.

Expressway Maintenance

The Issuer seeks to maintain a high level of safety for motorists by keeping expressways and engineering structures in good condition. The Issuer also seeks to reduce the effects of wear and tear from traffic and the aging of the expressway network, and to meet the technical standards applicable to expressways and engineering structures.

The Issuer believes that regular inspection of the expressways and engineering structures is critical to extending the life of the expressways under the Issuer's management. The Issuer systematically inspects and tests the expressways semi-annually. Expressway surfaces are generally replaced every five to ten years. Engineering structures, signage and other works are also systematically inspected and tested periodically. As of December 31, 2021, approximately 59% of the Issuer's employees performed functions relating to maintenance and repair of the expressways and engineering structures. A substantial part of the maintenance and repair work is outsourced to third party contractors. In 2019, 2020 and 2021 the Issuer's costs relating to maintenance and repairs amounted to ₩768 billion, ₩836 billion and ₩789 billion, respectively.

Traffic

Traffic volume on the expressways under the Issuer's management is determined by the number of kilometers in service and the number of motorists utilizing the expressways, which in turn are influenced by a number of factors, including toll rates, the economic conditions in Korea, the number of registered vehicles in Korea, fuel prices and the accessibility and existence of alternative means of transportation.

The Issuer calculates traffic volume for a given period of calculation by aggregating the number of vehicles which have exited the expressways through the Issuer's toll plazas during such period. This method helps to reduce double counting of vehicles traveling on more than one route during the same journey. The table below presents traffic volume on the expressways operated by the Issuer, toll revenue from the use of such expressways and the total number of registered vehicles in Korea for the periods indicated.

	Traffic Volume (in millions)				
Period	**Passenger Vehicles**	**Non-passenger Vehicles**	**Total Number of Vehicles**	**Toll Revenue**	**Total Registered Vehicles**
				(in billions of Won)	**(in millions)**
2019	1,497	163	1,660	4,122	24
2020	1,458	155	1,614	3,964	24
2021	1,534	164	1,698	4,179	25

Source: Korea National Statistical Office and the Issuer's internal estimates

Traffic Management

The Issuer believes that traffic management and motorist assistance are part of its key functions. The Issuer has a Traffic Information Center, which seeks to optimize traffic flow on the expressway network by providing prompt and reliable traffic information to motorists using the expressways. The Traffic Information Center collects real-time traffic information from toll plazas, magnetic loops installed on the expressways, closed-circuit TVs at toll plazas and at various points along the expressways, emergency roadside telephones, patrol cars and regional weather forecasts. The Issuer's traffic management system is able to offer motorists with current and integrated expressway traffic information twenty-four hours a day, seven-days a week, through a call center and various broadcasting media, such as variable message signs, the Internet, a voice message service accessible by telephone and app services accessible by smart phones. The Traffic Information Center also receives data from the toll collection system and provides information such as travel speeds, traffic congestion, the amount of time required to travel a certain section of the expressway and optimal travel routes between various points on the expressway network. In addition, in order to reduce the number of times the motorists have to stop to pay tolls and otherwise improve the convenience of road usage, the Issuer has recently established an integrated toll system between the expressways operated by the Issuer and certain privately operated expressways and is currently expanding the areas in which the standardized expressway pass for nation-wide use can used.

Safety and Security

The safety and security of the motorists using the expressway network under the Issuer's management is a key priority for the Issuer. The Issuer works closely with the national police force to control traffic, and ensure the safety and security of motorists using the expressways. The national police force routinely patrols the expressways and the Issuer has established plans that outline the Issuer's response procedures to ensure motorists' safety and security. In recognition of the adverse effect on traffic conditions from heavy rainfalls and snowfalls, the Issuer seeks to continually improve its safety and emergency response procedures, including a state-of-art meteorological disaster response system, helicopter rescue operations, in order to more rapidly and effectively detect, as well as respond to, emergency situations. The Issuer has also expanded facilities for preventing traffic accidents, such as rest areas, and public awareness campaigns for safe driving and against drunk driving.

Accidents

The Issuer seeks to reduce the rate of traffic accidents on the expressways operated by the Issuer. The number of traffic accidents on the expressways operated by the Issuer was 1,931, 1,834 and 1,735 in 2019, 2020 and 2021, respectively. The number of fatalities (measured as deaths resulting at or within 30 days following the traffic accident) was 176, 179 and 171 in 2019, 2020 and 2021, respectively.

The measures taken by the Issuer to reduce accidents on the expressways operated by the Issuer include regular inspections of road conditions, prompt removal of hazardous debris from roads, installing barriers, signs and other safety enhancing facilities in areas with high incidence of accidents, strict management of irrigation systems to minimize the duration of wet surface caused by rainfall, installing rest areas for sleep-deprived motorists, adoption of a state-of-art meteorological disaster response system, instant alert messaging of accidents through commercial road navigation systems, and operation of an accident prevention system using big data. The Issuer also seeks to increase motorists' awareness of expressway safety through media campaigns.

Tolls

The principal source of income for the Issuer is tolls collected by the Issuer from the motorists for the use of expressways operated by the Issuer. The following table presents, since 2010, the dates on which toll rate increases were implemented, compared to the inflation rate and the average increase of utility prices during the period between the date of such toll rate increase and the date of the toll rate increase immediately preceding such toll rate increase.

	Average Toll Rate Increase	Inflation for the Preceding 12 Months Period(1)	Average Increase of Utility Prices for the Preceding 12 Months Period(2)
		(%)	
November 2011	2.9	4.2	7.4
December 2015	4.7	1.3	(7.1)

Source: Korea National Statistical Office.

Notes:

(1) Consumer Price Index.

(2) Consists of electricity, fuel, and water prices.

Toll Collection System

The Issuer uses two kinds of systems for toll collection: "open" and "closed."

For an expressway using the open toll collection system, motorists stop only once to pay a fixed amount of toll at a given checkpoint regardless of their entry or exit points along such expressway. In contrast, for an expressway using the closed toll collection system, motorists must make two stops, once to collect a ticket at the entry point of the expressway and later to pay toll at the exit point of the expressway. Tolls at the open systems are for a fixed amount, while toll amounts at the closed systems vary depending on the distance traveled. Open systems are generally used for expressways with short distances, such as those servicing motorists within a greater metropolitan area that typically have a high level of traffic congestion, while closed systems are generally used for expressways with long distances, such as between major cities.

In an effort to alleviate congestion at toll plazas, the Issuer operates an automated toll collection system known as "Hi-Pass." The system utilizes radio signals, transmitted between electronic terminals located at toll booths and transponders loaded onboard vehicles, to automate the entire process of tracking a vehicle's entry and exit from the expressway network and the collection of toll payments, which are either deducted automatically from Hi-Pass cards purchased in advance by motorists or charged in arrears.

Toll Rate Structure

Under the current toll rate structure adopted in March 2004, the toll amount paid by motorists using the expressways operated by the Issuer is generally determined as the sum of a fixed basic amount and a variable additional amount. For expressways using the open toll system, the basic toll amount is ₩720 with the variable additional toll amount determined by multiplying the distance in kilometers from the toll booth where the toll is being collected to the nearest entry/exit point on the expressway by a coefficient in the range of ₩44.3 to ₩74.4, depending on the vehicle type. For expressways using the closed toll system, the basic toll amount is ₩900 with the variable additional toll amount determined by multiplying the distance in kilometers actually traveled by the motorist (measured as the distance between the entry and exit checkpoints on the relevant expressway traveled by the motorist) by the coefficient used in the open toll rate calculation.

For expressways with only two lanes, tolls are reduced by 50% for both the basic and additional rates. For expressways with six lanes or more, the coefficient used in computing the additional variable rate is increased by 20%. Reduced toll rates also apply to certain types of vehicles, such as vehicles with engine displacements of 1,000 cubic centimeters or less and cargo vehicles using the expressways during designated off-peak hours, as well as commuters using the expressways during peak rush hour times.

Toll Collection

The Issuer collects tolls at a collection of toll booths known as toll plazas, typically located near the exit points of a given expressway. Motorists can pay tolls either manually or automatically. Manual payments involve the motorist stopping at a toll booth located at a lane designated for manual payment, by paying the toll to the toll collector stationed in the toll booth by cash. Automatic payments involve the motorist passing through (without stopping by) a toll booth located at a lane designated for Hi-Pass payment, where the toll is automatically debited from the motorist's Hi-Pass card account upon passing by the Hi-Pass reader at the toll booth. Each of the Issuer's toll plazas has a combination of manual and Hi-Pass toll booths.

The operation of the Issuer's toll booth plazas is outsourced to outside service providers under service contracts. The Issuer believes that, compared to direct handling of toll collection by internal employees of the issuer, such outsourcing reduces overhead (including employment-related benefits) and increases operational efficiency. However, since March 2013, a number of lawsuits have been filed by toll gate workers employed by outside service providers seeking to be recognized as employees of the Issuer. See "Litigation."

As of December 31, 2021, the Hi-Pass system was under operation at all of the toll booth plazas operated by the Issuer. The Issuer plans to continue to increase the proportion of Hi-Pass lanes at toll plazas. The Issuer believes that the availability of the Hi-Pass system at all of its toll plazas helps to improve traffic flow at toll plazas by reducing congestion from the vehicles stopping to make manual payments and also reduce the unit cost of revenue for the Issuer as the Hi-Pass system requires lower overhead in the long term compared to the manual toll booths staffed in person.

The Issuer also offers motorists the option of paying toll charges in arrears, in effect allowing Hi-Pass cards to be used as credit cards and thereby encouraging the use of these payment methods to paying by cash, which generally involves a longer stopover time due to the time required to hand out changes.

The Issuer is committed to continually improving the toll collection process. The Issuer gathers data on the number, type and driving distances of motorists who utilize the expressways operated by the Issuer based on either the magnetic tickets issued to motorists or information transmitted by the Hi-Pass system. The data is transmitted to the Issuer's headquarters by optical fiber cable laid along the expressways for auditing and recording. The data collected allows the Issuer to keep accurate records of the amount of tolls received and aids in reducing losses from fraud. At the same time, the Issuer can assess traffic volumes at various points on the expressways to assist in traffic management. Furthermore, the Issuer started implementing the Smart Tolling system in 2016. The Smart Tolling system will gradually replace toll booths operated by toll workers by utilizing advanced image recognition technologies to identify and subsequently charge motorists, which serves to reduce congestion from the vehicles unregistered for the Hi-Pass system stopping to make manual payments at toll plazas. The Issuer believes that the increased width of the Smart Tolling lanes compared to Hi-Pass lanes will also help reduce congestion from vehicles registered for Hi-Pass system slowing down near the toll plazas. See "– Traffic – Traffic Management."

Toll Concessions

Under the KEC Act and the Toll Road Act, the Issuer has the exclusive right to collect tolls on the expressways operated by the Issuer until it recovers all of its investments made in connection with the construction of all of the expressways under the National $10x10+6R^2$ Plan, including related financing costs. In addition, the Toll Road Act requires the MOLIT to set the toll collection period for a period not exceeding 30 years. If the Issuer does not completely recover its investments made in connection with the construction of expressways under the National $10x10+6R^2$ Plan, including related financing costs, within the period set by the MOLIT, the MOLIT will consider extending the toll collection period upon the request of the Issuer.

Other Businesses

Service Areas and Gas Stations

In addition to the Issuer's principal business of constructing, managing and maintaining expressways, the Issuer also engages in the business of leasing service areas and gas stations. The Issuer leases to third parties the right to operate service areas and gas stations located at various points along the expressways. As of December 31, 2021, the Issuer leased 177 service areas and 178 gas stations. The Issuer's revenue from leasing service areas and gas stations was ₩247 billion, ₩174 billion and ₩165 billion in 2019, 2020 and 2021, respectively. As of December 31, 2021, the Issuer also directly operated 5 service areas and 11 gas stations.

The Issuer generally builds the service areas and gas stations and then leases them to third parties, selected through an open, competitive bidding process, who then operate various businesses, such as restaurants and shops, at such service areas and sell gasoline and liquefied petroleum gas at such gas stations. These operators make payments for the right to operate a business at the service areas and the gas stations. The terms of these leases are generally five years.

The Issuer allows service area and gas station operators, selected through an open, competitive bidding process, to construct their own structures and facilities. These operators generally pay a reduced fee for the right to operate such service areas and gas stations, as compared to those operators who conduct business on service areas and gas stations constructed by the Issuer. Allowing these operators to construct their own structures and facilities allows the Issuer to reduce its service area and gas station related investment costs. The terms of the contracts with these operators require that title to the structures and facilities constructed at the service area or gas station, as applicable, must be transferred to the Issuer without consideration at the end of the contract period. The length of the contract period is dependent on the size of the operator's investment.

	As of December 31,		
	2019	2020	2021
Number of service areas[1]	195	199	201
Number of gas stations[2]	200	206	208

Notes:

(1) Includes three directly operated service area.

(2) Includes liquefied petroleum gas stations and nine directly operated gas stations.

	As of December 31,		
	2019	2020	2021
Revenue from leasing of service areas	₩187	₩106	99
Revenue from leasing of gas stations	₩60	₩69	66
Total	₩247	₩174	165

Development of Areas Adjacent to Expressways

The construction and expansion of expressways create certain opportunities for development in areas such as public roads owned by the Government which have become obsolete, such as interchanges and areas under bridges. The Issuer develops, or supports third parties' development of, various businesses on these areas, which provide a variety of services to motorists and the general public. The lands on which these developments take place are owned by either the Government or the Issuer. The types of developments include theme parks, cultural centers, premium outlets, shopping mall complexes and solar energy complexes, among others. The Issuer has developed, or supported the development of, 132 such areas, of which 173 were in operation as of December 31, 2021.

At certain interchanges, the Issuer develops, or supports the development of, freight terminals and warehouses which are leased to and operated by private parties, generally for ten year terms.

Supporting and Incidental Services

The Issuer provides certain supporting services to the Government on a contractual basis. These services include acquiring land related to expressways and supervising the construction of structures, such as pedestrian bridges, on behalf of the Government. All of the actual costs incurred by the Issuer in providing such services are passed through to the Government.

The Issuer also provides, as part of its incidental business, certain services to the Government and other third parties, which principally consist of acquiring land unrelated to expressways for local municipalities.

Technical Consulting and Research and Development

The Issuer engages in the business of providing certain services to the non-governmental third parties for fees. These services include providing technical consulting and operating research and development projects with regard to road construction and maintenance.

Overseas Operations

The Issuer on occasion provides technical consulting services to Korean and foreign companies and government agencies engaged in road construction projects overseas. For example, in December 2014, the Issuer was selected by the Algerian government to supervise the installation of equipment to facilitate the toll payment system in certain sections of the Algeria East-West Highway. In December 2014, the Issuer was selected by the Bangladesh government to supervise the construction of the main Padma Bridge. In December 2016, the Issuer and the Road Development Authority of the Republic of Mauritius entered into a Memorandum of Understanding providing for the cooperation in the field of construction and maintenance of roads, bridges and tunnels in the context of the implementation of the Road Decongestion Program.

Subsidiaries, Affiliated Companies and Other Investments

As of December 31, 2021, the Issuer had two subsidiaries, KECFM and KECS, that were consolidated under the Government Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea. KECFM was established in June 2018 as a wholly owned subsidiary of the Issuer and engages in facility management and safety patrol business for the Issuer. KECS was established in May 2019 as a wholly owned subsidiary of the Issuer and engages in customer service business for the Issuer, including toll fee collection and call centre and traffic broadcasting operations.

The Issuer also holds equity interest in the following companies.

Busan-Ulsan Expressway Co., Ltd. ("BUEC"), the company that constructed and is currently operating the privately funded Busan-Ulsan Expressway, was established in May 2006. Construction on the Busan-Ulsan Expressway was completed in December 2008. As of December 31, 2021, the Issuer held a 51% equity interest in BUEC, with the remaining 49% held by the National Pension Corporation.

Korea Construction Management Corporation ("KCMC") was established in March 1999 and engages in the business of construction supervision. As of December 31, 2021, the Issuer held a 42.50% equity interest in KCMC, with the remainder held by Korea Land and Housing Corporation and Korea Water Resources Corporation, each of which is a Government-owned entity.

Expressway Solar Power Co., Ltd. ("Expressway Solar") was established in April 2012 and engages in the business of solar energy generation. As of December 31, 2021, the Issuer held a 29% equity interest in Expressway Solar.

Highway Solar Co., Ltd. ("Highway Solar") was established in 2013 and engages in the business of solar and other forms of renewable energy generation. As of December 31, 2021, the Issuer held a 29% equity interest in Highway Solar.

Seoul-Chuncheon Expressway Co., Ltd. ("SCEC") was established in 2002 and is engaged in the business of operating the Seoul-Chuncheon Expressway Co., Ltd. As of December 31, 2021, the Issuer held a 10% equity interest in SCEC.

DREAMLINE Corporation which engages in the business of leasing fiber-optic networks on expressways, was established in July 1997. As of December 31, 2021, the Issuer held a 1.1% equity interest in DREAMLINE Corporation.

The 2nd Seoul-Incheon Linking Highway Co., Ltd. was established in August 2007 and engages in the business of operating the 2nd Seoul-Incheon Linking Highway Co., Ltd. As of December 31, 2021, the Issuer held a 4.76% equity interest in the 2nd Seoul-Incheon Linking Highway Co., Ltd.

The Seoul North Highway Corporation was established in October 2007 and engages in the business of operating the northern part of the Seoul Highway. As of December 31, 2021, the Issuer held a 10% equity interest in the Seoul North Highway Corporation.

The Korea Overseas Infrastructure & Urban Development Corporation ("KIND") was established in June 2018 and engages in the business of supporting global Public-Private-Partnership business. As of December 31, 2021, the Issuer held a 5.28% equity interest in this entity.

BAKAD International B.V. was established in February 2020 and engages in the business of designing, constructing, maintaining and financing the Almaty Ring Road in Kazakhstan. As of December 31, 2021, the Issuer held a 0.1% equity interest in this entity.

As part of the Government's initiative to streamline public corporations and make them more profitable, the Issuer is required to sell its stake in certain of its subsidiaries, associates, joint ventures and other investments in the near future. In accordance with such initiative, the Issuer is currently taking steps to sell its equity interests in SCEC, BUEC and Dreamline, subject to prevailing market conditions. The Issuer is also planning KCMC to be integrated into Korea Authority of Land & Infrastructure Safety. The Issuer plans to sell its equity interest once the integration is completed.

Research and Development

The Issuer's Expressway and Transportation Research Institute ("ETRI"), established in 1973, is Korea's leading road research institute. ETRI engages in traffic, road pavement and infrastructure research, reviews and maintains a program to assure quality control at construction sites, examines all construction materials and performs safety checks of facilities. Investigating and solving various problems in expressway construction, and maintenance and management of construction sites, ETRI is a leader in domestic road technology development and participates in joint national research programs with the Government. ETRI is designated by the MOLIT and the Ministry of Knowledge Economy as an organization specializing in safety assessment and has obtained an ISO 9001 certification, an international quality standard system in the fields of expressway design, development, construction and service. In 2019, 2020 and 2021, the Issuer incurred ₩48 billion, ₩52 billion and ₩54 billion of other selling and administrative expenses on research salaries and research expenses, which consisted of 0.6%, 0.5% and 0.5%, respectively, of total revenue.

Competition

The Issuer faces two principal types of competition: (i) non-road modes of transportation, such as railway, and (ii) alternative road networks, such as toll-free public expressways and private expressways.

The principal competing mode of transportation in Korea that services the comparable destinations covered by the expressways operated by the Issuer is the national railway system, including the high-speed railway commonly known as KTX. However, the Issuer does not believe that rail transportation poses a material threat to the Issuer's business because high-speed railways (and railways in general) are used for long distance travel, while expressways are used mostly for short distance travel. For example, the Issuer estimates that approximately 90% of travel in Korea is for a distance of less than 100 kilometers (and approximately 54% of travel for a distance of less than 30 kilometers) and the average distance traveled on expressways is approximately 50 kilometers. In addition, the Issuer believes that the majority of travelers prefer driving to riding trains due to the greater convenience and privacy associated with the former. In addition, traveling by train requires the traveler to tailor their schedules to meet pre-set departure times, as well as arrange for other modes of transportation to travel to and from trains stations from their departure points and to their ultimate destinations. Furthermore, trains generally do not operate 24 hours a day, and travelers traveling at a time other than train operating hours have few other options than driving. Nevertheless, in recognition of competition from railways regardless of its effect, the Issuer is taking steps to improve the facilities on expressways that service the same destinations as railways and to enhance the convenience of the expressways.

Toll-free highways and expressways funded by private capital are the two principal alternative automotive modes of transportation available to motorists in Korea. The Issuer believes that toll-free highways do not represent a significant threat to the Issuer's business because these roads generally have fewer lanes, require more travel time due to lower speed limits, generally have lower road quality compared to expressways operated by the Issuer and generally do not provide the closest route to intended destinations.

As for privately funded expressways, 24 projects have to-date been approved by the MOLIT for development by private enterprises. Of these 24 projects, 20 have begun commercial operations in Korea, namely the Incheon Airport Highway, the Cheonan-Nonsan Expressway, the New Daegu-Busan Expressway, the Ilsan-Twegyewon Expressway, the Busan-Ulsan Expressway, the Seoul-Chuncheon Expressway, the Yongin-Seoul Expressway, the Incheon Bridge, the West Suwon-Pyeongtaek Expressway, the Pyeongtaek-Siheung Expressway, the Suwon-Kwangmyeong Expressway, the Kwangju-Wonju Expressway, the Busan New Port the second road behind, the Incheon-Gimpo Expressway, the Sangju-Yeongcheon Expressway, the Guri-Pocheon Expressway, the the Anyang-Seongnam Expressway, the Oksan-Ochang Expressway, the Seoul Munsan Expressway and the Bongdam-Songsan Expressway. See "Relationship with the Government – Government Road Construction Policy – Expressways funded by private capital." The Issuer does not believe that the private expressway projects will pose a material threat to the Issuer's business given their limited overlap with the expressways operated by the Issuer and the location of these projects in relatively less populated areas. For example, the Incheon Airport Highway services a route that is not covered by the Issuer and therefore has not resulted in any loss of traffic volume for the Issuer. The Issuer further believes that the amount of traffic volume lost to the Cheonan-Nonsan Expressway is not material as these cities have relatively small population. With respect to the other projects planned for private development, these routes are expected to service destinations not served by the Issuer. The private expressway projects connect and complement the major expressways operated and maintained by the Issuer under the National 10x10+6R^2 Plan.

Environmental Matters

The Issuer is subject to the Framework Act on Environmental Policy of 1990, as amended, and a number of related regulations covering air pollution, air quality, water pollution and the administration of hazardous substances. The Issuer believes that it is in material compliance with all applicable environmental laws and regulations. See "Risk Factors – Risks Relating to the Issuer – Environmental regulations may limit the Issuer's operations" and "Risk Factors – Risks Relating to the Issuer – The Issuer is subject to various operational risks, any of which could give rise to significant delays or additional costs."

In an effort to minimize environmental damage during the construction of expressways, the Issuer analyses the potential environmental impact of each expressway project and retains environmental experts from the initial design stage until completion of construction to evaluate the environmental impact of the proposed expressway project. From the beginning of the construction planning and design stage, the Issuer establishes strict procedures for inspection and analysis of environmental impact and also engages in open dialogue with affected residents and other members of the public through explanatory sessions and public hearings.

The Issuer implements an environmental management plan, designed to minimize negative environmental impact from the construction and operation of its expressways. Among other things, the plan contemplates taking measure to reduce pollution (including noise pollution), minimize waste generated from the construction and operation of expressways and make efficient use of energy and other resources in constructing and operating expressways.

Litigation

As of December 31, 2021, the Issuer was involved in 473 different court proceedings as a defendant, with an aggregate claim against the Issuer in the amount of ₩870 billion. Approximately 0.15% of such proceedings involving an aggregate claim against the Issuer in the amount of ₩1.6 billion were in relation to traffic accidents where the accident victims or insurance companies alleged road mismanagement by the Issuer.

A number of toll gate workers employed by outside service providers have, since March 2013, filed lawsuits demanding that the Issuer recognizes the workers as its regular employees and accordingly pay wages in an amount equal to what they would have been entitled to if they were regular employees of the Issuer, or approximately ₩698 billion to the workers. In August 2019, the supreme court ruled in favor of the toll gate workers, upholding the decision made by the court of appeals that the toll workers should be recognized as regular employees of the Issuer. The specific amount the toll gate workers are entitled to receive from the Issuer is yet to be determined. In addition, in October 2013, safety patrol workers employed by outside service providers have filed lawsuits demanding that the Issuer recognize the workers as its regular employees and accordingly pay wages in an amount equal to what they would have been entitled to if they were regular employees of the Issuer, or approximately ₩41 billion to the workers. In June 2016 the court of appeals ruled partially in favor of the safety patrol workers. In June 2016, the court of appeals ruled partially in favor of the safety patrol workers and the Issuer paid approximately ₩11 billion to the safety patrol workers. Such decision of the court of appeals was upheld by the supreme court in May 2020. Several similar cases are also pending in district courts and courts of appeals. Although the Issuer has set aside ₩619 billion as provision for litigation, if these cases are adversely determined against the Issuer, there is no assurance that it would not have a material adverse effect on the Issuer, its business, financial condition or results of operation.

Insurance

The Issuer maintains casualty and fire insurance for its facilities. The Issuer does not maintain any business interruption insurance, natural disaster insurance or liability insurance. In 2019, 2020 and 2021, the Issuer's loss on disasters amounted to ₩26 billion, ₩18 billion and ₩18 billion, respectively.

Employees

As of December 31, 2021, the Issuer had 8,523 full-time employees, all of whom are employed within Korea. Of the total number of employees, 75.2% were engineers, 22.3% were operations staff and 2.5% were administrative staff.

The Issuer has had a labor union since 1987. As of December 31, 2021, approximately 89.6% of the Issuer's employees were members of the union, which negotiates a collective bargaining agreement and wage agreement for its members each year. The Issuer maintains a good relationship with its employees and has not experienced any material labor disruptions.

MANAGEMENT

Under the Act on the Management of Public Institutions and the Issuer's articles of incorporation, the Issuer's management is vested in the board of directors (the "BOD"), which consists of not more than 15 directors, including the president.

The directors are classified into two categories: standing directors and non-standing directors. The number of standing directors may not be more than seven, including the president, and the non-standing directors may not be more than eight. In addition, the number of standing directors must be less than one-half of the total number of directors. The Issuer currently has seven standing directors and eight non-standing directors. The standing directors other than the Issuer's president and standing member of the Audit Committee are appointed by the Issuer's president upon approval by the general meeting of the Issuer's shareholders. The Issuer's standing directors presently constitute the Issuer's executive officers. The non-standing directors are appointed from among specialists in the private sector by the Minister of the MOEF upon nomination by the Committee on the Nomination of Officials ("Nomination Committee"), which is established in accordance with the Act on the Management of Public Institutions and composed of the non-standing directors and other members appointed by the BOD and approval by the Steering Committee of the MOEF and the general meeting of the Issuer's shareholders. The Issuer's president is appointed by the President of Korea upon the motion of the Minister of the MOLIT after being nominated by the Nomination Committee and approved by the Steering Committee of the MOEF and the general meeting of the Issuer's shareholders. Non-standing directors must constitute the majority of the members of the Nomination Committee. The president represents the Issuer and administers the Issuer's day-to-day business in all matters not specifically designated as responsibilities of the BOD.

The Act on the Management of Public Institutions and the articles of incorporation of the Issuer also require the Issuer to establish an Audit Committee as a committee of the BOD. The Audit Committee is comprised of three members, of whom two members must be non-standing directors. The principal function of the Audit Committee is to conduct internal review of the Issuer's operations and accounting, and to present its opinion to the BOD, thereby ensuring the independence and professionalism of the Issuer. The Issuer's standing member of the Audit Committee is appointed by the President of Korea upon the motion of the Minister of the MOEF after being nominated by the Nomination Committee and approved by the Steering Committee of the MOEF and the general meeting of the Issuer's shareholders. The standing member of the Audit Committee is also a member of the BOD.

The names, titles, and outside occupations, if any, of the directors and members of the Audit Committee and the respective years in which they took office are set forth below.

Name	Age[1]	Title/Position	Outside Occupation, if any	Position held since
Kim, Jinsook	63	President	None	April 10, 2020
Kim, Taeksu	59	Standing Director and Standing Member of the Audit Committee	None	January 5, 2021
Kim, Ilhwan	59	Standing Director	None	May 15, 2020
Shin, Donghee	58	Standing Director	None	May 15, 2020
Kim, Janghwan.	57	Standing Director	None	February 8, 2022
Cho, Jugi	59	Standing Director	None	December 28, 2020

Name	Age(1)	Title/Position	Outside Occupation, if any	Position held since
Kim, Dongsu	59	Standing Director	None	December 28, 2020
Kim, Junki	58	Non-Standing Director	Professor of Business Management at Seoul National University Graduate School, Member of the Regulatory Reform Committee	September 15, 2020
Kim, Jeong Im	54	Non-Standing Director	Representative Director of Seoro Architects, member of the Presidential Committee on Autonomy and Decentralization	April 1, 2019
Lee, Sang Ho	58	Non-Standing Director	Member of the Presidential Committee for Balanced National Development, member of the Presidential Committee on Autonomy and Decentralization	September 15, 2020
Hwang, Dukhee	58	Non-Standing Director	Lawyer at Law Firm Jinsung	September 15, 2020
Kim, Mie Jung	59	Non-Standing Director and Non-Standing Member of the Audit Committee	Professor of Global Economics and Commerce at Dongguk University, vice president of Korea Trade Research Association Inc.	February 25, 2021
Kim, Jawjin	51	Non-Standing Director	Lawyer at Haewoo Law Office	February 25, 2021
Lee, Jongwon	41	Non-Standing Director	Professor at the Sorabol University Department of Nursing	October 1, 2021
Lee, Seungki	56	Non-Standing Director (Auditor) and Non-Standing Member of the Audit Committee	Accountant at Hanaro Accounting Office	February 11, 2022

Note:

(1) As of February 25, 2022.

Kim, Jinsook has been the president of the Issuer since April 10, 2020. Ms. Kim received a Bachelor's degree Architectural Engineering from Inha University and a Master's degree in Urban Planning from University of Wisconsin. She previously served as the director of National Agency for Administrative City Construction.

Kim, Taeksu has been a standing director and the auditor general of the audit committee since January 5, 2021. Mr. Kim received a Bachelor's degree in Political Science from Seoul National University. He previously served as a lawyer at Jeongse Law.

Kim, Ilhwan has been a standing director since May 18, 2020. Mr. Kim currently serves as the vice president and executive managing director of the Construction Division. He received a Bachelor's degree in Civil Engineering, a Master's degree in Technology Policy and a Ph.D. degree in Civil and Environmental Engineering from Seoul National University. He previously served as director of the Expressway Design Division of the Issuer.

Shin, Donghee has been a standing director since May 18, 2020. Mr. Shin currently serves as executive managing director of the Planning Division. Mr. Shin received a Bachelor's degree in Law from Hanyang University, a Master's degree in Management from KDI School of Public Policy and Management and a Ph.D. degree in Administration from Gachon University. He previously served as director of the Planning & Coordination Division of the Issuer.

Kim, Janghwan has been a standing director since February 8, 2022. Mr. Kim currently serves as executive managing director of the Business Division. Mr. Kim received a Bachelor's degree in Business Administration from Chonnam National University. He previously served as head of the Finance Division of the Issuer.

Cho, Jugi has been a standing director since December 28, 2020. Mr. Cho currently serves as executive managing director of the Road Division. Mr. Cho received a Bachelor's degree Civil Engineering and a Master's degree in Traffic Engineering from Hanyang University. He previously served as director of Construction Division of the Issuer.

Kim, Dongsu has been a standing director since December 28, 2020. Mr. Kim currently serves as executive managing director of the Road Traffic Division. Mr. Kim received a Bachelor's degree in in Civil Engineering from Pusan National University and a Master's degree Civil Engineering from Kyunghee University. He previously served as general manager of the Daegu Gyeongbuk Division of the Issuer.

Kim, Jeong Im has been a non-standing director since April 1, 2019. Ms. Kim received a Bachelor's degree and a Master's degree in Architectural Engineering at Yonsei University. Ms. Kim is currently a Representative Director of Seoro Architects and a member of the Presidential Committee on Autonomy and Decentralization.

Kim, Junki has been a non-standing director since September 15, 2020. Mr. Kim received a Bachelor's degree in Economics from the London School of Economics and Political Science, a Master's degree and a Ph.D. degree in Policy Studies from Harvard University. Mr. Kim is currently a Professor of Business Management at Seoul National University Graduate School and a member of the Regulatory Reform Committee.

Lee, Sang Ho has been a non-standing director since September 15, 2020. Mr. Lee received a Bachelor's degree in Psychology and a Master's degree in Administration from Keimyung University. Mr. Lee is currently a member of the Presidential Committee for Balanced National Development and a member of the Presidential Committee on Autonomy and Decentralization.

Hwang, Dukhee has been a non-standing director since September 15, 2020. Ms. Hwang received a Bachelor's degree in Law from Hanyang University. Ms. Hwang is currently a lawyer at Law Firm Jinsung.

Kim, Mie Jung has been a non-standing director since February 25, 2021. Ms. Kim received a Bachelor's degree in Trade, a Master's degree and a Ph.D. degree in Business Administration from Dongguk University. Ms. Kim is currently a professor of Global Economics and Commerce at Dongguk University and the vice president of Korea Trade Research Association Inc.

Kim, Jawjin has been a non-standing director since February 25, 2021. Mr. Kim received a Bachelor's degree in Law from Yonsei University. Mr. Kim is currently a lawyer at Haewoo Law Office.

Lee, Jongwon has been a non-standing director since October 1, 2021. Mr. Lee received a Bachelor's degree in Business Administration, a Master's degree in Education from Yonsei University. Mr. Lee is currently a Professor at the Sorabol University Department of Nursing.

Lee, Seungki has been a non-standing director (auditor) since February 11, 2022. Mr. Lee received a Bachelor's degree in Business Administration from Yeungnam University. Mr. Lee is currently an accountant at Hanaro Accounting Office.

Resolutions can be passed by a majority of the board members.

The Issuer's president may be removed by the President of Korea upon motion of the MOLIT. In addition, the Minister of the MOEF may either recommend or request removal of the Issuer's president upon approval by the Steering Committee of the MOEF if the results of operations are deemed to be poor. The standing directors, in the order contemplated by internal regulations, assist the president and act for the president when the president is unable to act.

The business address of the directors is 77, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, Korea.

Compensation of Directors and Executive Officers

For the year ended December 31, 2021, the key management personnel compensations paid was ₩1.2 billion.

Board Practices

The term of the president is three years, and the term of the directors (other than the president) is two years. The president and directors may be reappointed for successive periods of one year each.

The president's management contract provides for benefits upon termination of his or her employment. The president is eligible for termination benefits after more than one year of continuous service. For each year of employment with the Issuer, the payment amount for termination benefits is equal to the average value of compensation for one month.

The terms for termination benefits for standing directors are determined in accordance with the Issuer's internal regulations for executive compensation. Standing directors are eligible for benefits after retirement or upon death following one year of continuous service. The payment amount for retirement benefits is calculated by computing the standard level of compensation and multiplying by the number of continuous years of service.

Related Party Transactions

The Issuer engages from time to time in various transactions with related parties, which include its associates and joint ventures. The Issuer believes that it has conducted its transactions with related parties as it would in comparable arm's length transactions with a non-related party, on a basis substantially as favorable to the Issuer as would be obtainable in such transactions. For details on the Issuer's related party transactions, see Note 39 to the Issuer's consolidated financial statements as of and for the year ended December 31, 2019, 2020 and 2021.

SHARE OWNERSHIP

The following table sets out certain information relating to the principal shareholders of the Issuer as of December 31, 2021.

	As of December 31, 2021	
Name of Shareholder	**Number of Common Shares Held**	**% of Total Common Shares**
Ministry of Land, Infrastructure and Transport	3,392,849,903	87.77%
The Export-Import Bank of Korea[(1)]	328,714,464	8.50%
The Korea Development Bank[(2)]	92,628,550	2.40%
Korea Asset Management Corporation[(3)]	35,842,408	0.93%
Korea Housing Finance Corporation[(4)]	15,000,000	0.39%
Kookmin Bank[(5)]	573,448	0.01%
Total common shares	3,865,608,773	100.00%

Notes:

(1) The Government owns, directly or indirectly, 100% of The Export-Import Bank of Korea, as of December 31, 2021.

(2) The Government owns, directly or indirectly, 100% of The Korea Development Bank, as of December 31, 2021.

(3) All shares of the Ministry of Economy and Finance were transferred to the Korea Asset Management Corporation on April 20, 2021 as investment in kind by the Ministry of Economy and Finance.

(4) The Government owns, directly or indirectly, 100% of Korea Housing Finance Corporation, as of December 31, 2021.

(5) Kookmin Bank received equity interests in the Issuer from the Government in connection with the recapitalization of Kookmin Bank.

REGULATION

The Issuer was established in order to facilitate road maintenance and to contribute to the development of road transportation under the KEC Act. The KEC Act contemplates that the Issuer may engage in the following activities:

- constructing, reconstructing, repairing or maintaining toll roads;
- constructing, reconstructing, repairing or maintaining roads necessary to facilitate the use of toll roads (including roads connected to toll roads);
- constructing, reconstructing, repairing or maintaining expressways for the use of which tolls will be charged;
- building and operating toll parking lots;
- building and operating service and gas stations adjacent to toll roads;
- acquiring and managing real estate necessary for the road business;
- constructing, reconstructing, repairing or maintaining roads by a mandate from the Government, local governments or other third parties and conducting research, tests, inspections, measurements or design of roads;
- construction, repair and maintenance, inspection, design and construction management of roads in foreign countries;
- managing toll roads, toll parking lots and other related facilities thereof by delegation of the Government, local governments or other third parties;
- building, operating and managing of "new and renewable energy facilities" pursuant to the Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy to utilize lands and facilities managed by the Issuer;
- business using road site and facilities relating to roads in order to facilitate the use of toll roads;
- property development business, such as establishing distribution and storage centers in areas adjacent to toll roads, in order to facilitate the usefulness and convenience of toll roads;
- research and technology development on toll roads;
- investments and making contributions to businesses related to the Issuer's business;
- any other business incidental to the foregoing businesses; and
- any other business in which the Issuer may engage under other laws.

In addition, the KEC Act provides that:

- the Issuer may (subject to board approval) issue bonds or receive loans up to an amount not exceeding four times the total of capital and reserves;
- the Government may guarantee the repayment of the principal of and interest on the bonds issued by the Issuer and loans borrowed by the Issuer; and
- the Government may, within the limit of the national budget, subsidize part of the Issuer's operating expenses, provide loans and subscribe to the bonds issued by the Issuer.

The Act on the Management of Public Institutions sets forth regulations on general matters such as reporting obligations of business performance, procedures for enactment and amendment of the articles of incorporation, method of formation and resolution of a board of directors, appointment, removal and duties of officials, budgeting, submission of statement of accounts, disclosure of business and inspection of operations and management of public institutions, including the Issuer.

The Toll Road Act contains provisions regarding the construction and reconstruction of toll roads, the management right of toll roads, determination, collection and distribution of tolls and restrictions on usage of collected tolls, including the following:

- The Issuer is entitled to collect tolls from the users of the toll roads which the Issuer constructed or reconstructed in accordance with the provisions of the Toll Road Act.
- Total amounts of the tolls to be collected may not exceed the aggregate costs for the construction, maintenance and repair of the relevant toll road.
- The Issuer may collect tolls and additional tolls not paid from a person who is obligated to pay tolls in accordance with the tax collection procedure with the approval of the MOLIT.

Under the Road Act, the MOLIT may delegate to the Issuer part of the statutory authority of the MOLIT with respect to expressways including, without limitation, construction and maintenance of expressways, in which case the Issuer, within the scope of such delegation, may exercise such authority over the relevant expressway as the government agency in charge.

TAXATION

The following summary contains a description of certain Korean and U.S. federal income tax consequences of the ownership and disposition of Notes, but it does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a decision to purchase or dispose of Notes. This summary is based on the Korean and U.S. federal tax laws in force on the date of this Offering Memorandum (which are subject to change and which changes may have retroactive effect), and does not describe any tax consequences arising under the laws of any state, locality or taxing jurisdiction other than the laws of Korea and the federal laws of the United States.

Prospective purchasers of Notes should consult their own tax advisors as to the Korean, U.S. or other tax consequences of the ownership and disposition of Notes, including the effect of any foreign, state or local tax laws.

Korean Taxation

The taxation of non-resident individuals and non-Korean corporations ("Non-Residents") generally depends on whether they have a "Permanent Establishment" (as defined under Korean law) in Korea to which the relevant Korean source income is attributable or with which such relevant Korean source income is effectively connected. Non-Residents without such a Permanent Establishment in Korea are taxed in the manner described below. Non-Residents with such Permanent Establishment are taxed in accordance with different rules.

Tax on Interest

Special Tax Treatment Control Law (the "STTCL") exempts interest on notes denominated in a foreign currency (excluding payment to a Korean corporation or resident or a Permanent Establishment of a foreign corporation in Korea) from Korean income tax or corporation tax; provided that, the offering of the Notes is deemed to be an overseas issuance under the STTCL.

If not exempt under STTCL, the rate of income tax or corporation tax applicable to interest or any premium on the Notes, for a Non-Resident without a Permanent Establishment in Korea, is currently 14%. In addition, a tax surcharge, called a local income tax, is imposed at the rate of 10% of the income or corporation tax (raising the total tax rate to 15.4%).

The tax is withheld by the payer of the interest. Accordingly, Korean law entitles the payer of the interest to claim rectification of the Korean tax withheld. Korean law also entitles the person who has suffered the withholding of Korean tax to recover from the Government any part of the Korean tax withheld in the event that the payer of the interest pays the withheld taxes and submits the payment record within the deadline to the tax office. If he subsequently produces evidence that he was entitled to have his tax withheld at a lower rate, it may be possible to claim withheld tax from the tax office directly, or if not, from the payer.

The tax rates may be reduced by applicable tax treaty, convention or agreement between Korea and the country of the recipient of the interest. The relevant tax treaties are discussed below.

In addition, in order to obtain the benefit of a reduced rate available under applicable tax treaties, a non-resident holder should submit an application for such reduced rate to the party liable for the withholding before the receipt of relevant payment (if there is no change in the contents of such application, it is not required to re-submit for three years thereafter), together with a certificate of the non-resident holder's tax residence issued by a competent authority of the non-resident holder's residence country. However, this requirement does not apply to exemptions under Korean tax law. If the non-resident holder fails to obtain the benefit of a reduced rate by failing to make a timely submission of the above-mentioned application, the non-resident holder can get the tax refunded if the submission is made within 5 years thereafter.

Index Linked Interest Notes

A detailed description of the tax considerations relevant to Index Linked Interest Notes will be provided in the applicable Pricing Supplement.

Tax on Capital Gains

The Korean tax laws currently exclude from Korean taxation gains made by a Non-Resident without a Permanent Establishment in Korea from the sale of the Notes to a Non-Resident (other than to its Permanent Establishment in Korea). In addition, capital gains earned by a Non-Resident with or without a Permanent Establishment from the transfer outside Korea of the Notes are currently exempt from taxation by virtue of STTCL, provided that the Notes are "foreign currency denominated bonds issued outside of Korea" under the STTCL.

In the absence of an applicable tax treaty or any other special tax laws reducing or eliminating the capital gains tax, the applicable rate of tax is the lower of 11% (including surtax) of the gross realization proceeds (the "Gross Realization Proceeds") and (subject to the production of satisfactory evidence of the acquisition cost and the transfer cost of the relevant Notes) 22% (including surtax) of the realized gain. The realized gain is calculated as the Gross Realization Proceeds less the acquisition cost and the transfer cost (including taxes, dues and brokerage commissions paid in direct connection with the acquisition and transfer of the Notes). If such evidence shows that no gain (or a loss) was made on the sale no Korean tax is payable. There is no provision under the relevant Korean law for offsetting gains and losses or otherwise aggregating transactions for the purpose of computing the net gain attributable to sales of securities of Korean companies.

The purchaser or any other designated withholding agent of Notes is obliged under Korean law to withhold the applicable amount of Korean tax and make payment thereof to the relevant Korean tax authority. Unless the seller can claim the benefit of an exemption from the tax under an applicable tax treaty or in the absence of the seller producing satisfactory evidence of his acquisition cost and the transfer cost in relation to the Notes being sold, the purchaser or such withholding agent must withhold an amount equal to 11% of the Gross Realization Proceeds. Any amounts withheld by the purchaser or such withholding agent must be paid to the relevant Korean tax authority no later than the tenth day of the month following the month in which the payment for the purchase of the relevant Notes occurred. Failure to transmit the withheld tax to the Korean tax authorities in time technically subjects the purchaser or the withholding agent to penalties under Korean tax laws.

In addition, in order to obtain the benefit of a tax exemption available under applicable tax treaties, a non-resident holder should submit to the purchaser or the withholding agent an application for exemption, together with a certificate of the non-resident holder's tax residence issued by a competent authority of the non-resident holder's residence country. The purchaser or the withholding agent is required to submit the application for exemption together with the certificate of the non-resident holder's tax residence to its district tax office no later than ninth day of the month following the month in which sale proceeds are paid. However, this requirement does not apply to exemptions under Korean tax law.

Inheritance Tax and Gift Tax

Korean inheritance tax is imposed upon (a) all assets (wherever located) of the deceased if at the time of his death he was domiciled in Korea or had resided in Korea for at least 183 days immediately prior to his death and (b) all property located in Korea which passes on death (irrespective of the residence the deceased). Gift tax is imposed in similar circumstances to the above. The taxes are imposed if the value of the relevant property is above a certain limit and the rate varies according to the value of the relevant property and the identity of the parties involved.

Under the Korean inheritance and gift tax laws, notes issued by Korean corporations are deemed located in Korea irrespective of where they are physically located or by whom they are owned.

Stamp Duty and Securities Transaction Tax

No stamp, issue or registration duties will be payable in Korea by the Noteholders in connection with the issue of the Notes. A securities transaction tax will not be imposed on the transfer of Notes.

Tax Treaties

At the date of this Offering Memorandum, Korea has tax treaties with inter alia Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Singapore, Sweden, Switzerland, the United Kingdom and the United States of America where the rate of withholding tax on interest is reduced, generally to between 5 and 16.5% and the tax on capital gains is often eliminated.

At present, Korea has not entered into any tax treaties regarding its inheritance or gift tax.

U.S. Federal Income Taxation

The following discussion is a summary of certain United States federal income tax consequences of the purchase, ownership and disposition of Notes as of the date hereof.

The discussion set forth below is applicable to United States Holders (as defined below) (i) who are residents of the United States for purposes of the current income tax treaty between the United States and Korea (the "Treaty"); (ii) whose Notes are not, for purposes of the Treaty, attributable to a permanent establishment in Korea; and (iii) who otherwise qualify for the full benefits of the Treaty.

Except where noted, this summary deals only with holders that hold Notes as capital assets, and does not represent a detailed description of the United States federal income tax consequences applicable to you if you are subject to special treatment under the United States federal income tax laws, including if you are:

- a dealer in securities or currencies;
- one of certain financial institutions;
- a regulated investment company;
- a real estate investment trust;
- a tax-exempt organization;
- an insurance company;
- a person holding the Notes as part of a hedging, integrated, conversion or constructive sale transaction 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 partnership or other pass-through entity for United States federal income tax purposes;

- a person required to accelerate the recognition of any item of gross income with respect to the Notes as a result of such income being recognized on an applicable financial statement;

- a person whose "functional currency" is not the U.S. dollar; or

- a United States expatriate.

As used herein, a "United States Holder" means a beneficial owner of a Note that is for United States federal income tax purposes:

- an individual citizen or resident of the United States;

- a corporation (or any other entity treated as a corporation for United States 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 United States 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 United States persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

This summary is based upon provisions of the U.S. Internal Revenue Code of 1986, as amended (the "Code"), and final, temporary and proposed regulations, rulings and judicial decisions, as well as on the Treaty, all as of the date hereof. Those authorities may be changed, perhaps retroactively, so as to result in United States federal income tax consequences different from those summarized below.

The discussion below assumes that all Notes issued pursuant to the Program will be classified for United States federal income tax purposes as the Issuer's indebtedness and you should note that in the event of an alternative characterization, the tax consequences would differ from those discussed below. Moreover, the discussion below deals only with Notes with a term of 30 years or less. The Issuer will summarize any special United States federal tax considerations relevant to a particular issue of the Notes, including any Notes with a longer term than 30 years, in the applicable Pricing Supplement.

If a partnership (or other entity or arrangement treated as a partnership for United States federal income tax purposes) holds Notes, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner in a partnership holding Notes, you should consult your tax advisors.

This summary does not represent a detailed description of the United States federal income tax consequences to you in light of your particular circumstances and does not address the Medicare tax on net investment income or the effects of any state, local or non-United States tax laws. If you are considering the purchase of Notes, you should consult your own tax advisors concerning the particular United States federal income tax consequences to you of the ownership of the Notes, as well as the consequences to you arising under the laws of any other taxing jurisdiction.

Bearer Notes are not being offered to United States Holders. A United States Holder who owns a Bearer Note may be subject to limitations under United States income tax laws, including the limitations provided in sections 165(j) and 1287(a) of the Code.

Payments of Interest

Except as set forth below, interest on a Note will generally be taxable to you as ordinary income at the time it is paid or accrued in accordance with your method of accounting for United States federal income tax purposes.

In addition to interest on the Notes (which includes any Korean tax withheld from the interest payments you receive), you will be required to include in income any additional amounts paid in respect of such Korean tax withheld. You may be entitled to deduct or credit this tax, subject to certain limitations (including that the election to deduct or credit foreign taxes applies to all of your foreign taxes for a particular tax year). Korean taxes withheld in excess of the rate allowed by the Treaty will not be eligible for credit against your United States federal income tax liability. Interest income (including any additional amounts) on a Note generally will be considered foreign source income and, for purposes of the United States foreign tax credit, generally will be considered "passive category income." You will generally be denied a foreign tax credit for foreign taxes imposed with respect to the Notes where you do not meet a minimum holding period requirement during which you are not protected from risk of loss. 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 under your particular circumstances.

Original Issue Discount

If you own Notes issued with original issue discount ("OID"), such as a Zero Coupon Note, you will be subject to special tax accounting rules, as described in greater detail below. In that case, you should be aware that you generally must include OID in gross income (as ordinary income) in advance of the receipt of cash attributable to that income. However, you generally will not be required to include separately in income cash payments received on the Notes, even if denominated as interest, to the extent those payments do not constitute "qualified stated interest," as defined below. Notice will be given in the applicable Pricing Supplement when the Issuer determines that a particular Note will be issued with original issue discount (an "original issue discount Note").

Additional rules applicable to Notes that are denominated in or determined by reference to a currency other than the U.S. dollar ("foreign currency Notes") and that are issued with OID are described under "– Foreign Currency Notes" below.

A Note with an "issue price" that is less than the stated redemption price at maturity (the sum of all payments to be made on the Note other than "qualified stated interest") generally will be issued with OID in an amount equal to that difference if that difference is at least 0.25% of the stated redemption price at maturity multiplied by the number of complete years to maturity (or, in the case of an Installment Note, the weighted average maturity). The "issue price" of each Note in a particular offering will be the first price at which a substantial amount of that particular offering is sold to the public for cash. The term "qualified stated interest" means stated interest that is unconditionally payable in cash or in property, other than debt instruments of the Issuer, and meets all of the following conditions:

- it is payable at least once per year;
- it is payable over the entire term of the Note; and
- it is payable at a single fixed rate or, subject to certain conditions, a rate based on one or more interest indices.

The Issuer will give you notice in the applicable Pricing Supplement when the Issuer determines that a particular Note will bear interest that is not qualified stated interest.

If you own a Note issued with *de minimis* OID, which is discount that is not OID because it is less than 0.25% of the stated redemption price at maturity multiplied by the number of complete years to maturity (or, in the case of an Installment Note, the weighted average maturity), you generally must include the *de minimis* OID in income at the time principal payments on the Notes are made in proportion to the amount paid. Any amount of *de minimis* OID that you have included in income will be treated as capital gain.

Certain of the Notes may contain provisions permitting them to be redeemed prior to their stated maturity date at the Issuer's option and/or at your option. Original issue discount Notes containing those features may be subject to rules that differ from the general rules discussed herein. If you are considering the purchase of original issue discount Notes with those features, you should carefully examine the applicable Pricing Supplement and should consult your own tax advisors with respect to those features since the tax consequences to you with respect to OID will depend, in part, on the particular terms and features of the Notes.

If you own original issue discount Notes with a maturity upon issuance of more than one year, you generally must include OID in income in advance of the receipt of some or all of the related cash payments using the "constant yield method" described in the following paragraphs.

The amount of OID that you must include in income if you are the initial holder of an original issue discount Note is the sum of the "daily portions" of OID with respect to the Note for each day during the taxable year or portion of the taxable year in which you held that Note ("accrued OID"). The daily portion is determined by allocating to each day in any "accrual period" a pro rata portion of the OID allocable to that accrual period. The "accrual period" for an original issue discount Note may be of any length and may vary in length over the term of the Note, provided that each accrual period is no longer than one year and each scheduled payment of principal or interest occurs on the first day or the final day of an accrual period. The amount of OID allocable to any accrual period other than the final accrual period is an amount equal to the excess, if any, of:

- the Note's "adjusted issue price" at the beginning of the accrual period multiplied by its yield to maturity, determined on the basis of compounding at the close of each accrual period and properly adjusted for the length of the accrual period, over

- the aggregate of all qualified stated interest allocable to the accrual period.

OID allocable to a final accrual period is the difference between the amount payable at maturity, other than a payment of qualified stated interest, and the adjusted issue price at the beginning of the final accrual period. Special rules will apply for calculating OID for an initial short accrual period. The "adjusted issue price" of a Note at the beginning of any accrual period is equal to its issue price increased by the accrued OID for each prior accrual period, determined without regard to the amortization of any acquisition or bond premium, as described below, and reduced by any payments previously made on the Note other than qualified stated interest. Under these rules, you will have to include in income increasingly greater amounts of OID in successive accrual periods.

Floating Rate Notes are subject to special OID rules. In the case of an original issue discount Note that is a Floating Rate Note, both the "yield to maturity" and "qualified stated interest" will be determined solely for purposes of calculating the accrual of OID as though the Note will bear interest in all periods at a fixed rate generally equal to the rate that would be applicable to interest payments on the Note on its date of issue or, in the case of certain Floating Rate Notes, the rate that reflects the yield to maturity that is reasonably expected for the Note. Additional rules may apply if either:

- the interest on a Floating Rate Note is based on more than one interest index; or

- the principal amount of the Note is indexed in any manner.

The discussion above generally does not address Notes providing for contingent payments. You should carefully examine the applicable Pricing Supplement regarding the United States federal income tax consequences of the holding and disposition of any Notes providing for contingent payments.

You may elect to treat all interest on any Note as OID and calculate the amount includible in gross income under the constant yield method described above. For purposes of this election, interest includes stated interest, acquisition discount, OID, de minimis OID, market discount, de minimis market discount and unstated interest, as adjusted by any amortizable bond premium or acquisition premium. You should consult with your own tax advisors about this election.

Korean withholding taxes may be imposed at times that differ from the times at which you are required to include interest or OID in income for United States federal income tax purposes and this disparity may limit the amount of foreign tax credit available.

Short-Term Notes

In the case of Notes having a term of one year or less ("short-term Notes"), all payments, including all stated interest, will be included in the stated redemption price at maturity and will not be qualified stated interest. As a result, you will generally be taxed on the discount instead of stated interest. The discount will be equal to the excess of the stated redemption price at maturity over the issue price of a short-term Note, unless you elect to compute this discount using tax basis instead of issue price. In general, individuals and certain other cash method United States Holders of short-term Notes are not required to include accrued discount in their income currently unless they elect to do so, but may be required to include stated interest in income as the income is received. United States Holders that report income for United States federal income tax purposes on the accrual method and certain other United States Holders are required to accrue discount on short-term Notes (as ordinary income) on a straight-line basis, unless an election is made to accrue the discount according to a constant yield method based on daily compounding. If you are not required, and do not elect, to include discount in income currently, any gain you realize on the sale, exchange or retirement of a short-term Note will generally be ordinary income to you to the extent of the discount accrued by you through the date of sale, exchange or retirement. In addition, if you do not elect to currently include accrued discount in income you may be required to defer deductions for a portion of your interest expense with respect to any indebtedness attributable to the short-term Notes.

Market Discount

If you purchase a Note for an amount that is less than its stated redemption price at maturity (or, in the case of an original issue discount Note, its adjusted issue price), the amount of the difference will be treated as "market discount" for United States federal income tax purposes, unless that difference is less than a specified de minimis amount. Under the market discount rules, you will be required to treat any principal payment on, or any gain on the sale, exchange, retirement or other disposition of, a Note as ordinary income to the extent of the market discount that you have not previously included in income and is treated as having accrued on the Note at the time of the payment or disposition.

In addition, you may be required to defer, until the maturity of the Note or its earlier disposition in a taxable transaction, the deduction of all or a portion of the interest expense on any indebtedness attributable to the Note. You may elect, on a Note-by-Note basis, to deduct the deferred interest expense in a tax year prior to the year of disposition. You should consult your own tax advisors before making this election.

Any market discount will be considered to accrue ratably during the period from the date of acquisition to the maturity date of the Note, unless you elect to accrue on a constant interest method. You may elect to include market discount in income currently as it accrues, on either a ratable or constant interest method, in which case the rule described above regarding deferral of interest deductions will not apply. An election to accrue market discount on a current basis will apply to all debt instruments acquired with market discount that you acquire on or after the first day of the first taxable year to which the election applies. The election may not be revoked without the consent of the Internal Revenue Service ("IRS").

Acquisition Premium, Amortizable Bond Premium

If you purchase an original issue discount Note for an amount that is greater than its adjusted issue price but equal to or less than the sum of all amounts payable on the Note after the purchase date other than payments of qualified stated interest, you will be considered to have purchased that Note at an "acquisition premium." Under the acquisition premium rules, the amount of OID that you must include in gross income with respect to the Note for any taxable year will be reduced by the portion of the acquisition premium properly allocable to that year.

If you purchase a Note (including an original issue discount Note) for an amount in excess of the sum of all amounts payable on the Note after the purchase date other than qualified stated interest, you will be considered to have purchased the Note at a "premium" and, if it is an original issue discount Note, you will not be required to include any OID in income. You generally may elect to amortize the premium over the remaining term of the Note on a constant yield method as an offset to interest when includible in income under your regular accounting method. Special rules limit the amortization of premium in the case of convertible debt instruments. If you do not elect to amortize bond premium, that premium will decrease the gain or increase the loss you would otherwise recognize on disposition of the Note.

Sale, Exchange, Redemption, Retirement and Other Disposition of Notes

Your adjusted tax basis in a Note will, in general, be your cost for that Note, increased by OID, market discount or any discount with respect to a short-term Note that you previously included in income, and reduced by any amortized premium and any cash payments on the Note other than qualified stated interest. Upon the sale, exchange, redemption, retirement or other disposition of a Note, you will recognize gain or loss equal to the difference between the amount you realize upon the sale, exchange, redemption, retirement or other disposition (less an amount equal to any accrued and unpaid qualified stated interest, which will be taxable as interest income to the extent not previously included in income) and your adjusted tax basis in the Note. Except as described above with respect to certain short-term Notes or market discount, or with respect to gain or loss attributable to changes in exchange rates as discussed below with respect to foreign currency Notes, that gain or loss will be capital gain or loss and will be long-term capital gain or loss if you have held the Note for more than one year. Long-term capital gains of non-corporate United States Holders (including individuals) are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Gain or loss realized by you on the sale, exchange, redemption, retirement or other disposition of a Note will generally be treated as United States source gain or loss. Consequently, you may not be able to claim a credit for any Korean tax imposed upon a disposition of a Note unless such credit can be applied (subject to applicable limitations) against tax due on other income treated as derived from foreign sources.

Foreign Currency Notes

Payments of Interest. If you receive interest payments made in a currency other than the U.S. dollar (a "foreign currency") and you use the cash basis method of accounting, you will be required to include in income the U.S. dollar value of the amount received, determined by translating the foreign currency received at the spot rate of exchange (the "spot rate") for such foreign currency in effect on the date such payment is received regardless of whether the payment is in fact converted into U.S. dollars. You will not recognize exchange gain or loss with respect to the receipt of such payment.

If you use the accrual method of accounting, you may determine the amount of income recognized with respect to such interest in accordance with either of two methods. Under the first method, you will be required to include in income for each taxable year the U.S. dollar value of the interest that has accrued during such year, determined by translating such interest at the average rate of exchange for the period or periods (or portions thereof) in such year during which such interest accrued. Under the second method, you may elect to translate interest income at the spot rate on:

- the last day of the accrual period,
- the last day of the taxable year if the accrual period straddles your taxable year, or
- the date the interest payment is received if such date is within five business days of the end of the accrual period.

In addition, if you use the accrual method of accounting, upon receipt of an interest payment on a Note (including, upon the sale of a Note, the receipt of proceeds which include amounts attributable to accrued interest previously included in income), you will recognize exchange gain or loss in an amount equal to the difference between the U.S. dollar value of such payment (determined by translating the foreign currency received at the spot rate for such foreign currency on the date such payment is received) and the U.S. dollar value of the interest income you previously included in income with respect to such payment. Any such exchange gain or loss will generally be treated as United Sates source ordinary income or loss.

Original Issue Discount. OID on a Note that is also a foreign currency Note will be determined for any accrual period in the applicable foreign currency and then translated into U.S. dollars, in the same manner as interest income accrued by a holder on the accrual basis, as described above. You will recognize exchange gain or loss, which is generally United States source ordinary income or loss, when OID is paid (including, upon the sale of a Note, the receipt of proceeds that include amounts attributable to OID previously included in income) to the extent of the difference between the U.S. dollar value of such payment (determined by translating the foreign currency received at the spot rate for such foreign currency on the date such payment is received) and the U.S. dollar value of the accrued OID (determined in the same manner as for accrued interest). For these purposes, all receipts on a Note will be viewed:

- first, as the receipt of any stated interest payments called for under the terms of the Note,
- second, as receipts of previously accrued OID (to the extent thereof), with payments considered made for the earliest accrual periods first, and
- third, as the receipt of principal.

Market Discount and Bond Premium. The amount of market discount includible in income with respect to a foreign currency Note will generally be determined by translating the market discount determined in the foreign currency into U.S. dollars at the spot rate on the date the foreign currency Note is retired or otherwise disposed of. If you have elected to accrue market discount currently, then the amount which accrues is determined in the foreign currency and then translated into U.S. dollars on the basis of the average exchange rate in effect during such accrual period. You will recognize exchange gain or loss, which is generally United States source ordinary income or loss, with respect to market discount which is accrued currently using the approach applicable to the accrual of interest income as described above.

Bond premium on a foreign currency Note will be computed in the applicable foreign currency. If you have elected to amortize the premium, the amortizable bond premium will reduce interest income in the applicable foreign currency. At the time bond premium is amortized, exchange gain or loss, which is generally United States source ordinary gain or loss, will be realized with respect to such amortized premium based on the difference between spot rates at such time and the time of acquisition of the foreign currency Note.

Sale, Exchange, Redemption, Retirement and Other Disposition of Foreign Currency Notes. Upon the sale, exchange, redemption, retirement or other disposition of a foreign currency Note, you will recognize gain or loss equal to the difference between the amount realized upon the sale, exchange, redemption, retirement or other disposition (less an amount equal to any accrued and unpaid qualified stated interest, which will be treated as a payment of interest for United States federal income tax purposes) and your adjusted tax basis in the foreign currency Note. Your initial tax basis in a foreign currency Note generally will be your U.S. dollar cost. If you purchased a foreign currency Note with foreign currency, your cost generally will be the U.S. dollar value of the foreign currency amount paid for such foreign currency Note determined at the time of such purchase. If your foreign currency Note is sold, exchanged, redeemed, retired, or otherwise disposed of for an amount denominated in foreign currency, then your amount realized generally will be based on the spot rate of the foreign currency on the date of sale, exchange, redemption, retirement, or other disposition. If you are a cash method taxpayer and the foreign currency Notes are traded on an established securities market for United States federal income tax purposes, foreign currency paid or received is translated into U.S. dollars at the spot rate on the settlement date of the purchase or sale. An accrual method taxpayer may elect the same treatment with respect to the purchase and sale of foreign currency Notes traded on an established securities market, provided that the election is applied consistently.

Except as described above with respect to certain short-term Notes or with respect to market discount and subject to the foreign currency rules discussed below, such gain or loss will be capital gain or loss and will be long-term capital gain or loss if at the time of sale, exchange, redemption, retirement or other disposition, the foreign currency Note has been held for more than one year. Long term capital gains of non-corporate United States Holders (including individuals) are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Gain or loss realized by you on the sale, exchange, redemption, retirement, or other disposition of a foreign currency Note will generally be treated as United States source gain or loss. Consequently, you may not be able to claim a credit for any Korean tax imposed upon a disposition of a foreign currency Note unless such credit can be applied (subject to applicable limitations) against tax due on other income treated as derived from foreign sources.

A portion of your gain or loss with respect to the principal amount of a foreign currency Note may be treated as exchange gain or loss. Exchange gain or loss generally will be treated as United States source ordinary income or loss. For these purposes, the principal amount of the foreign currency Note is your purchase price for the foreign currency Note calculated in the foreign currency on the date of purchase, and the amount of exchange gain or loss recognized is equal to the difference between (i) the U.S. dollar value of the principal amount determined on the date of the sale, exchange, redemption, retirement or other disposition of the foreign currency Note and (ii) the U.S. dollar value of the principal amount determined on the date you purchased the foreign currency Note (or, possibly, in the case of cash method or electing accrual method taxpayers, the settlement dates of such disposition and/or purchase, provided the foreign currency Note is treated as traded on an established securities market for United States federal income tax purposes). The amount of exchange gain or loss realized on the disposition of the foreign currency Note (with respect to both principal and accrued interest) will be limited to the amount of overall gain or loss realized on the disposition of the foreign currency Note.

Exchange Gain or Loss with Respect to Foreign Currency. Your tax basis in any foreign currency received as interest on a foreign currency Note or on the sale, exchange, redemption, retirement or other disposition of a foreign currency Note, will be the U.S. dollar value thereof at the spot rate in effect on the date the foreign currency is received. Any gain or loss recognized by you on a sale, exchange or other disposition of the foreign currency will be ordinary income or loss and generally will be United States source gain or loss.

Dual Currency Notes. If so specified in an applicable Pricing Supplement relating to a foreign currency Note, the Issuer may have the option to make all payments of principal and interest scheduled after the exercise of such option in a currency other than the specified currency. Applicable United States Treasury regulations generally (i) apply the principles contained in the regulations governing contingent debt instruments to Dual Currency Notes in the "predominant currency" of the Dual Currency Notes and (ii) apply the rules discussed above with respect to foreign currency Notes with OID for the translation of interest and principal into U.S. dollars. If you are considering the purchase of Dual Currency Notes, you should carefully examine the applicable Pricing Supplement and should consult your own tax advisors regarding the United States federal income tax consequences of the holding and disposition of such Notes.

Reportable Transactions. Treasury regulations issued under the Code meant to require the reporting of certain tax shelter transactions could be interpreted to cover transactions generally not regarded as tax shelters, including certain foreign currency transactions. Under the Treasury regulations, certain transactions are required to be reported to the IRS, including, in certain circumstances, a sale, exchange, redemption, retirement or other disposition of a foreign currency Note or foreign currency received in respect of a foreign currency Note to the extent that such sale, exchange, redemption, retirement or other disposition results in a tax loss in excess of a threshold amount. If you are considering the purchase of a foreign currency Note, you should consult with your own tax advisors to determine the tax return obligations, if any, with respect to an investment in the Notes, including any requirement to file IRS Form 8886 (Reportable Transaction Disclosure Statement).

Index Linked Interest Notes

The tax treatment of a United States Holder of Index Linked Interest Notes will depend on factors including the specific index or indices used to determine indexed payments on the Note and the amount and timing of any contingent payments of interest. Persons considering the purchase of Index Linked Interest Notes should carefully examine the applicable Pricing Supplement and should consult their own tax advisors regarding the United States federal income tax consequences of the holding and disposition of such Notes.

Information Reporting and Backup Withholding

In general, information reporting requirements will apply to certain payments of principal, interest (including OID) and premium paid on Notes and to the proceeds of sale of a Note paid to you (unless you are an exempt recipient such as a corporation). A backup withholding tax may apply to such payments if you fail to provide a taxpayer identification number or a certification of exempt status, or if you fail to report in full dividend and interest income.

Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your United States federal income tax liability provided the required information is timely furnished to the IRS.

CERTAIN ERISA CONSIDERATIONS

The following discussion is a summary of certain considerations associated with the purchase and holding of the Notes by (i) employee benefit plans that are subject to Title I of the U.S. Employee Retirement Income Security Act of 1974, as amended ("ERISA"), (ii) plans, individual retirement accounts and other arrangements that are subject to Section 4975 of the Code or provisions under any U.S. or non-U.S. federal, state, local or other laws or regulations that are similar to such provisions of the Code or ERISA (collectively, "Similar Laws"), and (iii) entities whose underlying assets are considered to include "plan assets" of any such plan, account or arrangement (each of the foregoing described in clauses (i), (ii) and (iii) referred to herein as a "Plan").

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 (an "ERISA Plan") and prohibit certain transactions involving the assets of an ERISA Plan and its fiduciaries or other interested parties. Under ERISA and the Code, any person who exercises any discretionary authority or control over the administration of such an ERISA Plan or the management or disposition of the assets of such an ERISA Plan, or who renders investment advice for a fee or other compensation to such an ERISA Plan, is generally considered to be a fiduciary of the ERISA Plan.

In considering an investment in the Notes (or any interest therein) of a portion of the assets of any Plan, a fiduciary should determine 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 Law relating to a fiduciary's duties to the Plan including, without limitation, the prudence, diversification, delegation of control and prohibited transaction provisions of ERISA, the Code and any other applicable Similar Laws.

Section 406 of ERISA and Section 4975 of the Code prohibit ERISA Plans from engaging in specified transactions involving "plan assets" with persons or entities who are "parties in interest," within the meaning 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 engaged in a non-exempt prohibited transaction may be subject to excise taxes and other penalties and liabilities under ERISA and/or the Code. In addition, the fiduciary of the ERISA Plan that engaged in such a non-exempt prohibited transaction may be subject to penalties and liabilities under ERISA and/or the Code. The acquisition and/or holding of Notes (or any interest therein) by an ERISA Plan with respect to which the Issuer, a Dealer or their respective subsidiaries is 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 exemption. In this regard, the U.S. Department of Labor has issued prohibited transaction class exemptions that may apply to the acquisition and holding of the Notes (or any interest therein). Each of the above-noted exemptions contains conditions and limitations on its application. Fiduciaries of ERISA Plans considering acquiring and/or holding the Notes (or any interest therein) in reliance on these or any other exemption should carefully review the exemption to assure it is applicable. There can be no assurance that all of the conditions of any such exemptions will be satisfied. There can be no assurance that any of these exemptions will be available.

Because of the foregoing, the Notes (or any interest therein) should not be purchased or held by any person investing in "plan assets" of any Plan, unless such purchase and holding will not constitute a non-exempt prohibited transaction under ERISA and the Code or a similar violation of any applicable Similar Laws.

By acceptance of a Note (or any interest therein), each purchaser and subsequent transferee of a Note (or interest therein) will be deemed to have represented and warranted that either (i) no portion of the assets used by such purchaser or transferee to acquire and hold the Notes (or interest therein) constitutes assets of any ERISA Plan or Plan or (ii) the purchase and holding of the Notes (or interest therein) by such purchaser or transferee will not constitute a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or 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 any Notes on behalf of, or with the assets of, any Plan, should consult with their counsel regarding the matters described herein.

The sale of any Notes to any Plan is in no respect a representation by us, the Dealers or any of our respective affiliates or representatives, 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 for Plans generally or any particular Plan. In this regard, neither this discussion nor anything provided in this offering memorandum is or is intended to be investment advice directed at any potential Plan purchasers or at Plan purchasers generally and such purchasers of any notes (or interests therein) should consult and rely on their own counsel and advisers as to whether an investment in Notes is suitable. Any ERISA Plan or Plan that purchases or holds a Note (or any interest therein) will agree by its purchase or holding of a Note (or any interest therein) that neither the Issuer, the Dealer or any of their affiliates has provided any investment advice or recommendations with respect to the purchase, holding or any subsequent sale or transfer of the Notes (or any interest therein) and that the ERISA Plan's or Plan's decision to purchase and hold a Note (or any interest therein) was made by a fiduciary to the ERISA Plan or Plan that acted independently and with the expertise needed to make such decision on behalf of the ERISA Plan or Plan.

BOOK-ENTRY CLEARANCE SYSTEMS

The information set out below is subject to any change in or reinterpretation of the rules, regulations and procedures of DTC, Euroclear or Clearstream (each a "Clearing System" and together, the "Clearing Systems") currently in effect. The information in this section concerning the Clearing Systems has been obtained from sources that the Issuer believes to be reliable, but none of the Issuer nor any Dealer takes any responsibility for the accuracy thereof. Investors wishing to use the facilities of any of the Clearing Systems are advised to confirm the continued applicability of the rules, regulations and procedures of the relevant Clearing System. None of the Issuer, the Arranger, any Dealer nor any other party to the Agency Agreement will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Notes held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests. The relevant Pricing Supplement will specify the Clearing System(s) applicable for each Series.

Book-entry Systems

DTC

DTC has advised the Issuer that it is a limited purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to Section 17A of the Exchange Act. DTC holds securities that its participants ("Participants") deposit with DTC. DTC also facilitates the settlement among Participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations ("Direct Participants"). DTC is owned by a number of its Direct Participants and by the New York Stock Exchange, Inc., the American Stock Exchange, Inc. and the National Association of Securities Dealers, Inc. Access to the DTC System is also available to others such as securities brokers and dealers, banks and trust companies that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants").

Under the rules, regulations and procedures creating and affecting DTC and its operations (the "Rules"), DTC makes book-entry transfers of Registered Notes among Direct Participants on whose behalf it acts with respect to Notes accepted into DTC's book-entry settlement system ("DTC Notes") as described below and receives and transmits distributions of principal and interest on DTC Notes. The Rules are on file with the U.S. Securities and Exchange Commission. Direct Participants and Indirect Participants with which beneficial owners of DTC Notes ("Owners") have accounts with respect to the DTC Notes similarly are required to make book-entry transfers and receive and transmit such payments on behalf of their respective Owners. Accordingly, although Owners who hold DTC Notes through Direct Participants or Indirect Participants will not possess Registered Notes, the Rules, by virtue of the requirements described above, provide a mechanism by which Direct Participants will receive payments and will be able to transfer their interest in respect of the DTC Notes.

Purchases of DTC Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the DTC Notes on DTC's records. The ownership interest of each actual purchaser of each DTC Note ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participant's records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the

Beneficial Owner entered into the transaction. Transfers of ownership interests in the DTC Notes are to be accomplished by entries made on the books of Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in DTC Notes, except in the event that use of the book-entry system for the DTC Notes is discontinued.

To facilitate subsequent transfers, all DTC Notes deposited by Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. The deposit of DTC Notes with DTC and their registration in the name of Cede & Co. effect no change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the DTC Notes; DTC's records reflect only the identity of the Direct Participants to whose accounts such DTC Notes are credited, which may or may not be the Beneficial Owners. The Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices shall be sent to Cede & Co. If less than all of the DTC Notes within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. will consent or vote with respect to DTC Notes. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the DTC Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the DTC Notes will be made to DTC. DTC's practice is to credit Direct Participants' accounts on the due date for payment in accordance with their respective holdings shown on DTC's records unless DTC has reason to believe that it will not receive payment on the due date. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to DTC is the responsibility of the Issuer, disbursement of such payments to Direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners is the responsibility of Direct and Indirect Participants.

Under certain circumstances, including if there is an Event of Default under the Notes, DTC will exchange the DTC Notes for definitive Registered Notes, which it will distribute to its Participants in accordance with their proportionate entitlements and which, if representing interests in a Rule 144A Global Note, will be legended as set forth under "Subscription and Sale and Transfer and Selling Restrictions."

Since DTC may only act on behalf of Direct Participants, who in turn act on behalf of Indirect Participants, any Owner desiring to pledge DTC Notes to persons or entities that do not participate in DTC, or otherwise take actions with respect to such DTC Notes, will be required to withdraw its Registered Notes from DTC as described below.

Euroclear and Clearstream

Euroclear and Clearstream each holds securities for its customers and facilitates the clearance and settlement of securities transactions by electronic book-entry transfer between their respective account holders. Euroclear and Clearstream provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream also deal with domestic securities markets in several countries through established depository and custodial relationships. Euroclear and Clearstream have established an electronic bridge between their two systems across which their respective participants may settle trades with each other.

Euroclear and Clearstream customers are world-wide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream is available to other institutions that clear through or maintain a custodial relationship with an account holder of either system.

Book-entry Ownership of and Payments in respect of DTC Notes

The Issuer may apply to DTC in order to have any Tranche of Notes represented by a Registered Global Note accepted in its book-entry settlement system. Upon the issue of any such Registered Global Note, DTC or its custodian will credit, on its internal book-entry system, the respective nominal amounts of the individual beneficial interests represented by such Registered Global Note to the accounts of persons who have accounts with DTC. Such accounts initially will be designated by or on behalf of the relevant Dealer. Ownership of beneficial interests in such a Registered Global Note will be limited to Direct Participants or Indirect Participants, including, in the case of any Regulation S Global Note, the respective depositaries of Euroclear and Clearstream. Ownership of beneficial interests in a Registered Global Note accepted by DTC will be shown on, and the transfer of such ownership will be effected only through, records maintained by DTC or its nominee (with respect to the interests of Direct Participants) and the records of Direct Participants (with respect to interests of Indirect Participants).

Payments in U.S. dollars of principal and interest in respect of a Registered Global Note accepted by DTC will be made to the order of DTC or its nominee as the registered holder of such Note. In the case of any payment in a currency other than U.S. dollars, payment will be made to the Exchange Agent on behalf of DTC or its nominee and the Exchange Agent will (in accordance with instructions received by it) remit all or a portion of such payment for credit directly to the beneficial holders of interests in the Registered Global Note in the currency in which such payment was made and/or cause all or a portion of such payment to be converted into U.S. dollars and credited to the applicable Participants' account.

The Issuer expects DTC to credit accounts of Direct Participants on the applicable payment date in accordance with their respective holdings as shown in the records of DTC unless DTC has reason to believe that it will not receive payment on such payment date. The Issuer also expects that payments by Participants to beneficial owners of Notes will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers, and will be the responsibility of such Participant and not the responsibility of DTC, the Principal Paying Agent, the Registrar or the Issuer. Payment of principal, premium, if any, and interest, if any, on Notes to DTC is the responsibility of the Issuer.

Transfers of Notes Represented by Registered Global Notes

Transfers of any interests in Notes represented by a Registered Global Note within DTC, Euroclear and Clearstream will be effected in accordance with the customary rules and operating procedures of the relevant clearing system. The laws in some States within the United States require that certain persons take physical delivery of securities in definitive form. Consequently, the ability to transfer Notes represented by a Registered Global Note to such persons may depend upon the ability to exchange such Notes for Notes in definitive form. Similarly, because DTC can only act on behalf of Direct Participants in the DTC system who in turn act on behalf of Indirect Participants, the ability of a person having an interest in Notes represented by a Registered Global Note accepted by DTC to pledge such Notes to persons or entities that do not participate in the DTC system or otherwise to take action in respect of such Notes may depend upon the ability to exchange such Notes for Notes in definitive form. The ability of any holder of Notes represented by a Registered Global Note accepted by DTC to resell, pledge or otherwise transfer such Notes may be impaired if the proposed transferee of such Notes is not eligible to hold such Notes through a direct or indirect participant in the DTC system.

Subject to compliance with the transfer restrictions applicable to the Registered Notes described under "Subscription and Sale and Transfer and Selling Restrictions," cross-market transfers between DTC, on the one hand, and directly or indirectly through Clearstream or Euroclear accountholders, on the other, will be effected by the relevant clearing system in accordance with its rules and through action taken by the Registrar, the Fiscal Agent and any custodian ("Custodian") with whom the relevant Registered Global Notes have been deposited.

On or after the Issue Date for any Series, transfers of Notes of such Series between accountholders in Clearstream and Euroclear and transfers of Notes of such Series between participants in DTC will generally have a settlement date of three business days after the trade date (T+3). The customary arrangements for delivery versus payment will apply to such transfers.

Cross-market transfers between accountholders in Clearstream or Euroclear and DTC participants will need to have an agreed settlement date between the parties to such transfer. Because there is no direct link between DTC, on the one hand, and Clearstream and Euroclear, on the other, transfers of interests in the relevant Registered Global Notes will be effected through the Registrar, the Fiscal Agent and the Custodian receiving instructions (and, where appropriate, certification) from the transferor and arranging for delivery of the interests being transferred to the credit of the designated account for the transferee. In the case of cross-market transfers, settlement between Euroclear or Clearstream accountholders and DTC participants cannot be made on a delivery versus payment basis. The securities will be delivered on a free delivery basis and arrangements for payment must be made separately.

DTC, Clearstream and Euroclear have each published rules and operating procedures designed to facilitate transfers of beneficial interests in Registered Global Notes among participants and accountholders of DTC, Clearstream and Euroclear. However, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued or changed at any time. None of the Issuer, the Agents or any Dealer will be responsible for any performance by DTC, Clearstream or Euroclear or their respective direct or indirect participants or accountholders of their respective obligations under the rules and procedures governing their operations and none of them will have any liability for any aspect of the records relating to or payments made on account of beneficial interests in the Notes represented by Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial interests.

SUBSCRIPTION AND SALE AND TRANSFER AND SELLING RESTRICTIONS

The Dealers have in an amended and restated program agreement dated October 12, 2012 (as amended, supplemented and/or restated from time to time, the "Program Agreement"), agreed with the Issuer a basis upon which they or any of them may from time to time agree to purchase Notes or procure purchasers of Notes. Any such agreement will extend to those matters stated under "Form of the Notes" and "Terms and Conditions of the Notes" above. In the Program Agreement, the Issuer has agreed to reimburse the Dealers for certain of their expenses in connection with the establishment of the Program and the issue of Notes under the Program and to indemnify the Dealers against certain liabilities incurred by them in connection therewith.

In order to facilitate the offering of any Tranche of the Notes, certain persons participating in the offering of the Tranche may to the extent permitted by applicable laws and regulations engage in transactions that stabilize, maintain or otherwise affect the market price of the relevant Notes during and after the offering of the Tranche. Specifically, such persons may over-allot or create a short position in the Notes for their own account by selling more Notes than have been sold to them by the Issuer. Such persons may also elect to cover any such short position by purchasing Notes in the open market. In addition, such persons may stabilize or maintain the price of the Notes by bidding for or purchasing Notes in the open market and may impose penalty bids, under which selling concessions allowed to syndicate members or other broker-dealers participating in the offering of the Notes are reclaimed if Notes previously distributed in the offering are repurchased in connection with stabilization transactions or otherwise. The effect of these transactions may be to stabilize or maintain the market price of the Notes at a level above that which might otherwise prevail in the open market. The imposition of a penalty bid may also affect the price of the Notes to the extent that it discourages resales thereof. No representation is made as to the magnitude or effect of any such stabilizing or other transactions. Such transactions, if commenced, may be discontinued at any time. Stabilization activities are subject to certain prescribed time limits in certain jurisdictions.

The Dealers and certain of their affiliates may have performed certain investment banking and advisory services for the Issuer and/or its affiliates from time to time for which they have received customary fees and expenses and may, from time to time, engage in transactions with and perform services for the Issuer and/or its affiliates in the ordinary course of their business. In connection with each Tranche of Notes issued under the Program, the Dealers or certain of their affiliates may purchase Notes and be allocated Notes for asset management and/or proprietary purposes but not with a view to distribution.

In connection with each Tranche of Notes issued under the Program, the Dealers or their respective affiliates may purchase Notes for its or their own account and enter into transactions, including credit derivatives, such as asset swaps, repackaging and credit default swaps relating to such Notes and/or other securities of the Issuer or its subsidiaries or associates at the same time as the offer and sale of each Tranche of Notes or in secondary market transactions. Such transactions would be carried out as bilateral trades with selected counterparties and separately from any existing sale or resale of the Tranche of Notes to which a particular Pricing Supplement relates (notwithstanding that such selected counterparties may also be purchasers of such Tranche of Notes).

Transfer Restrictions

As a result of the following restrictions, purchasers of Notes in the United States are advised to consult legal counsel prior to making any purchase, offer, sale, resale or other transfer of such Notes.

Each purchaser of Registered Notes (other than a person purchasing an interest in a Registered Global Note with a view to holding it in the form of an interest in the same Global Note) or person wishing to transfer an interest from one Registered Global Note to another or from global to definitive form or vice versa, will be required to acknowledge, represent and agree as follows (terms used in this paragraph that are defined in Rule 144A or in Regulation S are used herein as defined therein):

(i) that either: (a) it is a QIB, purchasing (or holding) the Notes for its own account or for the account of one or more QIBs and it is aware that any sale to it is being made in reliance on Rule 144A or (b) it is an Institutional Accredited Investor, that, prior to its purchase of the Notes has delivered to the Registrar an IAI Investment Letter in the form as set forth below or (c) it is outside the United States and is not a U.S. person;

(ii) that the Notes have not been and will not be registered under the Securities Act or any other applicable U.S. state securities laws and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except as set forth below;

(iii) that, unless it holds an interest in a Regulation S Global Note and either is a person located outside the United States or is not a U.S. person, if in the future it decides to resell, pledge or otherwise transfer the Notes or any beneficial interests in the Notes, it will do so, prior to the date which is one year after the later of the last Issue Date for the Series and the last date on which the Issuer or an affiliate of the Issuer was the owner of such Notes, only (a) to the Issuer or any affiliate thereof, (b) inside the United States to a person whom the seller 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, (c) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act, (d) pursuant to the exemption from registration provided by Rule 144 under the Securities Act (if available) or (e) pursuant to an effective registration statement under the Securities Act, in each case in accordance with all applicable U.S. state securities laws;

(iv) it will, and will require each subsequent holder to, notify any purchaser of the Notes from it of the resale restrictions referred to in paragraph (iii) above, if then applicable;

(v) by its purchase or transfer of a Note (or any interest therein), each purchaser and subsequent transferee of a Note will be deemed to have represented and warranted that either (i) it is not and for as long as it holds a Note (or interest therein) will not be an ERISA Plan or Plan, nor has any portion of the assets used by such purchaser or transferee to acquire and hold the Notes (or any interest therein) constitute assets of any ERISA Plan or Plan or (ii) the purchase and holding of the Notes (or any interest therein) by such purchaser or transferee will not constitute a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or similar violation under any applicable Similar Laws and that neither the Issuer, the Dealer or any of their affiliates has provided any investment advice or recommendations with respect to the purchase, holding or any subsequent sale or transfer of the Notes (or any interest therein) and that the ERISA Plan or Plan's decision to purchase and hold a Note (or any interest therein) was made by a fiduciary to the ERISA Plan or Plan that acted independently and with the expertise needed to make such decision on behalf of the ERISA Plan or Plan;

(vi) that Notes initially offered in the United States to QIBs will be represented by one or more Rule 144A Global Notes, that Notes offered to Institutional Accredited Investors will be in the form of Definitive IAI Registered Notes and that Notes offered outside the United States in reliance on Regulation S will be represented by one or more Regulation S Global Notes;

(vii) that the Notes, other than the Regulation S Global Notes, will bear a legend to the following effect unless otherwise agreed to by the Issuer:

"THIS SECURITY HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (A) REPRESENTS THAT (1) IT IS A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) PURCHASING THE SECURITIES FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ONE OR MORE QUALIFIED INSTITUTIONAL BUYERS OR (2) IT IS AN INSTITUTIONAL "ACCREDITED INVESTOR" (AS DEFINED IN RULE 501(A)(1), (2), (3) OR (7) UNDER THE SECURITIES ACT) (AN "INSTITUTIONAL ACCREDITED INVESTOR"); (B) AGREES THAT IT WILL NOT RESELL OR OTHERWISE TRANSFER THE SECURITIES EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND, PRIOR TO THE DATE WHICH IS ONE YEAR AFTER THE LATER OF THE LAST ISSUE DATE FOR THE SERIES AND THE LAST DATE ON WHICH THE ISSUER OR AN AFFILIATE OF THE ISSUER WAS THE OWNER OF SUCH SECURITIES OTHER THAN (1) TO THE ISSUER OR ANY AFFILIATE THEREOF, (2) INSIDE THE UNITED STATES TO A PERSON WHOM THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF

A QUALIFIED INSTITUTIONAL BUYER IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (3) OUTSIDE THE UNITED STATES IN COMPLIANCE WITH RULE 903 OR RULE 904 UNDER THE SECURITIES ACT, (4) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (5) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES AND ANY OTHER JURISDICTION; AND (C) IT AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS SECURITY IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND.

THIS SECURITY AND RELATED DOCUMENTATION (INCLUDING, WITHOUT LIMITATION, THE AGENCY AGREEMENT REFERRED TO HEREIN) MAY BE AMENDED OR SUPPLEMENTED FROM TIME TO TIME, WITHOUT THE CONSENT OF, BUT UPON NOTICE TO, THE HOLDERS OF SUCH SECURITIES SENT TO THEIR REGISTERED ADDRESSES, TO MODIFY THE RESTRICTIONS ON AND PROCEDURES FOR RESALES AND OTHER TRANSFERS OF THIS SECURITY TO REFLECT ANY CHANGE IN APPLICABLE LAW OR REGULATION (OR THE INTERPRETATION THEREOF) OR IN PRACTICES RELATING TO RESALES OR OTHER TRANSFERS OF RESTRICTED SECURITIES GENERALLY. THE HOLDER OF THIS SECURITY SHALL BE DEEMED, BY ITS ACCEPTANCE OR PURCHASE HEREOF, TO HAVE AGREED TO ANY SUCH AMENDMENT OR SUPPLEMENT (EACH OF WHICH SHALL BE CONCLUSIVE AND BINDING ON THE HOLDER HEREOF AND ALL FUTURE HOLDERS OF THIS SECURITY AND ANY SECURITIES ISSUED IN EXCHANGE OR SUBSTITUTION THEREFOR, WHETHER OR NOT ANY NOTATION THEREOF IS MADE HEREON).";

(viii) if it is outside the United States and is not a U.S. person, that if it should resell or otherwise transfer the Notes prior to the expiration of the distribution compliance period (defined as 40 days after the later of the commencement of the offering and the closing date with respect to the original issuance of the Notes), it will do so only (a)(i) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act or (ii) to a QIB in compliance with Rule 144A and (b) in accordance with all applicable U.S. state securities laws; and it acknowledges that the Regulation S Global Notes will bear a legend to the following effect unless otherwise agreed to by the Issuer:

"THIS SECURITY HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OR PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT. THIS LEGEND SHALL CEASE TO APPLY UPON THE EXPIRY OF THE PERIOD OF 40 DAYS AFTER THE COMPLETION OF THE DISTRIBUTION OF ALL THE NOTES OF THE TRANCHE OF WHICH THIS NOTE FORMS A PART."; and

(ix) that the Issuer and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that if any of such acknowledgements, representations or agreements made by it are no longer accurate, it shall promptly notify the Issuer; and if it is acquiring any Notes as a fiduciary or agent for one or more accounts, it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

Institutional Accredited Investors who purchase Registered Notes in definitive form offered and sold in the United States in reliance upon the exemption from registration provided by Regulation D of the Securities Act are required to execute and deliver to the Registrar an IAI Investment Letter. Upon execution and delivery of an IAI Investment Letter by an Institutional Accredited Investor, Notes will be issued in definitive registered form; see "Form of the Notes."

The IAI Investment Letter will state, among other things, the following:

(i) that the Institutional Accredited Investor has received a copy of this Offering Memorandum and such other information as it deems necessary in order to make its investment decision;

(ii) that the Institutional Accredited Investor understands that any subsequent transfer of the Notes is subject to certain restrictions and conditions set forth in this Offering Memorandum and the Notes (including those set out above) and that it agrees to be bound by, and not to resell, pledge or otherwise transfer the Notes except in compliance with, such restrictions and conditions and the Securities Act;

(iii) that, in the normal course of its business, the Institutional Accredited Investor invests in or purchases securities similar to the Notes;

(iv) that the Institutional Accredited Investor is an "accredited investor" within the meaning of Rule 501(a)(1), (2), (3) or (7) of Regulation D under the Securities Act that is an institution and has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment in the Notes, and it and any accounts for which it is acting are each able to bear the economic risk of its or any such accounts' investment for an indefinite period of time;

(v) that the Institutional Accredited Investor is acquiring the Notes purchased by it for its own account or for one or more accounts (each of which is an Institutional Accredited Investor) as to each of which it exercises sole investment discretion and not with a view to any distribution of the Notes, subject, nevertheless, to the understanding that the disposition of its property shall at all times be and remain within its control; and

(vi) that, in the event that the Institutional Accredited Investor purchases Notes, it will acquire Notes having a minimum purchase price of at least US$500,000 (or the approximate equivalent in another Specified Currency).

No sale of Legended Notes in the United States to any one purchaser will be for less than US$200,000 (or its foreign currency equivalent) principal amount or, in the case of sales to Institutional Accredited Investors, US$500,000 (or its foreign currency equivalent) principal amount and no Legended Note will be issued in connection with such a sale in a smaller principal amount. If the purchaser is a non-bank fiduciary acting on behalf of others, each person for whom it is acting must purchase at least US$200,000 (or its foreign currency equivalent) or, in the case of sales to Institutional Accredited Investors, US$500,000 (or its foreign currency equivalent) principal amount of Registered Notes.

Selling Restrictions

United States

The Notes have not been and will not be registered under the Securities Act, or with any securities regulatory authority of any state or other jurisdiction of the United States, and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in accordance with Regulation S or pursuant to an exemption from the registration requirements of the Securities Act. Subject to clause 1.5 below, each Dealer represents and agrees that it has offered sold and delivered any Notes, and will offer and sell any Notes (i) as part of their distribution at any time and (ii) otherwise until 40 days after the completion of the distribution of all Notes of the Tranche of which such Notes are a part, as determined and certified as provided below, only in accordance with Rule 903 of Regulation S under the Securities Act. Each Dealer who has purchased Notes of a Tranche hereunder (or in the case of a sale of a Tranche of Notes issued to or through more than one Dealer, each of such Dealers as to the Notes of such Tranche purchased by or through it or, in the case of a syndicated issue, the relevant Lead Manager) shall determine and certify to the Fiscal Agent the completion of the distribution of the Notes of such Tranche. On the basis of such notification or notifications, the Fiscal Agent has agreed to notify such Dealer/Lead Manager of the end of the distribution compliance period with respect to such Tranche. Each Dealer also agrees that, at or prior to confirmation of sale of Notes (other than a sale pursuant to Rule 144A), it will have sent to each distributor, dealer or person receiving a selling concession, fee or other remuneration that purchases Notes from it during the distribution compliance period a confirmation or notice to substantially the following effect:

"The Securities covered hereby have not been registered under the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), or with any securities regulatory authority of any state or other jurisdiction of the United States, and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons (i) as part of their distribution at any time or (ii) otherwise until 40 days after the completion of the distribution of the Securities as determined and certified by the relevant Dealer, in the case of a non-syndicated issue, or the Lead Manager, in the case of a syndicated issue, and except in either case in accordance with Regulation S under the Securities Act. Terms used above have the meanings given to them by Regulation S."

Terms used in this sub-clause 1.1 have the meanings given to them by Regulation S.

Each Dealer further represents and agrees that it, its affiliates or any persons acting on its or their behalf have not engaged and will not engage in any directed selling efforts with respect to any Note, and it and they have complied and will comply with the offering restrictions requirement of Regulation S.

In addition in respect of Bearer Notes where TEFRA D is specified in the applicable Pricing Supplement:

(i) except to the extent permitted under U.S. Treas. Reg. Section 1.163-5(c)(2)(i)(D) (or any successor rules in substantially the same form that are applicable for purposes of Section 4701 of the U.S. Internal Revenue Code of 1986, as amended) (the "**D Rules**"), each Dealer (i) represents that it has not offered or sold, and agrees that during the restricted period it will not offer or sell, Notes in bearer form to a person who is within the United States or its possessions or to a United States person, and (ii) represents that it has not delivered and agrees that it will not deliver within the United States or its possessions definitive Notes in bearer form that are sold during the restricted period;

(ii) each Dealer represents that it has and agrees that throughout the restricted period it will have in effect procedures reasonably designed to ensure that its employees or agents who are directly engaged in selling Notes in bearer form are aware that such Notes may not be offered or sold during the restricted period to a person who is within the United States or its possessions or to a United States person, except as permitted by the D Rules;

(iii) if it is a United States person, each Dealer represents that it is acquiring Notes in bearer form for purposes of resale in connection with their original issuance and if it retains Notes in bearer form for its own account, it will only do so in accordance with the requirements of U.S. Treas. Reg. Section l.163-5(c)(2)(i)(D)(6); and

(iv) with respect to each affiliate that acquires Notes in bearer form from a Dealer for the purpose of offering or selling such Notes during the restricted period, such Dealer repeats and confirms the representations and agreements contained in sub-clauses (i), (ii) and (iii) on such affiliate's behalf.

Terms used in this sub-clause 1.3 have the meanings given to them by the U.S. Internal Revenue Code of 1986 and Treasury regulations promulgated thereunder, including the D Rules.

In respect of Bearer Notes where TEFRA C is specified in the applicable Pricing Supplement, such Bearer Notes must be issued and delivered outside the United States and its possessions in connection with their original issuance. Each Dealer represents and agrees that it has not offered, sold or delivered, and will not offer, sell or deliver, directly or indirectly, such Bearer Notes within the United States or its possessions in connection with their original issuance. Further, each Dealer represents and agrees in connection with the original issuance of such Bearer Notes that it has not communicated, and will not communicate, directly or indirectly, with a prospective purchaser if such purchaser is within the United States or its possessions and will not otherwise involve its U.S. office in the offer or sale of such Bearer Notes.

Terms used in this clause 1.4 have the meanings given to them by the U.S. Internal Revenue Code of 1986 and Treasury regulations promulgated thereunder.

Notwithstanding anything above to the contrary, it is understood that Registered Notes may be offered and sold to QIBs in the United States in reliance on Rule 144A, and in connection therewith each Dealer represents and agrees that:

(i) offers, sales, resales and other transfers of Registered Notes made in the United States made or approved by a Dealer (including offers, resales or other transfers made or approved by a Dealer in connection with secondary trading) shall be made with respect to Registered Notes only and shall be effected pursuant to an exemption from the registration requirements of the Securities Act;

(ii) offers, sales, resales and other transfers of Notes made in the United States will be made only in private transactions to (1) a limited number of institutional investors that are accredited investors (as defined in Rule 501(a) (1), (2) and (3) under the Securities Act each such institutional investor being hereinafter referred to as an "**Institutional Accredited Investor**") that has executed and delivered to a Dealer an IAI Investment Letter, or (2) institutional investors that are reasonably believed to qualify as qualified institutional buyers within the meaning of Rule 144A (each such institutional investor being hereinafter referred to as a "**QIB**");

(iii) the Registered Notes will be offered in the United States only by approaching prospective purchasers on an individual basis. No general solicitation or general advertising within the meaning of Rule 502(c) under the Securities Act will be used in connection with the offering of the Registered Notes in the United States; and

(iv) no sale of Registered Notes in the United States to (1) any one Institutional Accredited Investor will be for less than U.S.$500,000 principal amount and (2) any one QIB will be for less than U.S.$100,000 principal amount or (in each case) its equivalent rounded upwards and no Registered Note will be issued in connection with such a sale in a smaller principal amount. If such purchaser is a non-bank fiduciary acting on behalf of others, each person for whom it is acting must purchase at least U.S.$500,000 (in the case of (1) above) or U.S.$100,000 (in the case of (2) above) principal amount of the Registered Notes.

The Issuer represents and agrees that any resale or other transfer, or attempted resale or other transfer of Notes sold as part of a private placement in the United States made other than in compliance with the restrictions set out in clause 1.5 shall not be recognized by the Issuer or any agent of the Issuer and shall be void.

Each issue of Index Linked Interest Notes or Dual Currency Notes shall be subject to such additional U.S. selling restrictions as the Issuer and the relevant Dealer may agree as a term of the issue and purchase of such Notes, which additional selling restrictions shall be set out in the applicable Pricing Supplement. The relevant Dealer agrees that it shall offer, sell and deliver such Notes only in compliance with such additional U.S. selling restrictions.

Prohibition of Sales to EEA Retail Investors

Unless the Pricing Supplement in respect of any Notes specifies the "Prohibition of Sales to EEA Retail Investors" as "Not Applicable", each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes which are the subject of the offering contemplated by this Offering Memorandum as completed by the Pricing Supplement in relation thereto to any retail investor in the European Economic Area. For the purposes of this provision:

(a) the expression "retail investor" means a person who is one (or more) of the following:

    (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "**MiFID II**"); or

    (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the "**Insurance Distribution Directive**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or

    (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended, the "**Prospectus Regulation**"); and

(b) the expression "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes.

If the Pricing Supplement in respect of any Notes specifies "Prohibition of Sales to EEA Retail Investors" as "Not Applicable", in relation to each Member State of the European Economic Area (each, a "**Relevant State**"), each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, that it has not made and will not make an offer of Notes which are the subject of the offering contemplated by the Offering Circular as completed by the final terms in relation thereto to the public in that Relevant State except that it may make an offer of such Notes to the public in that Relevant State:

(a) if the final terms in relation to the Notes specify that an offer of those Notes may be made other than pursuant to Article 1(4) of the Prospectus Regulation in that Relevant State (a **Non-exempt Offer**), following the date of publication of a prospectus in relation to such Notes which 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, provided that any such prospectus has subsequently been completed by the final terms contemplating such Non-exempt Offer, in accordance with the Prospectus Regulation, in the period beginning and ending on the dates specified in such prospectus or final terms, as applicable and the Issuer has consented in writing to its use for the purpose of that Non-exempt Offer;

(b) at any time to any legal entity which is a qualified investor as defined in the Prospectus Regulation;

(c) at any time 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 relevant Dealer or Dealers nominated by the Issuer for any such offer; or

(d) at any time in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of Notes referred to in (b) to (d) above shall require the Issuer or any Dealer to publish a prospectus pursuant to Article 3 of the Prospectus Regulation, or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer of Notes to the public" in relation to any Notes 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 Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes and the expression "**Prospectus Regulation**" means Regulation (EU) 2017/1129.

Prohibition of Sales to UK Retail Investors

Unless the Pricing Supplement in respect of any Notes specifies the "Prohibition of Sales to UK Retail Investors" as "Not Applicable", each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes which are the subject of the offering contemplated by this Offering Memorandum as completed by the Pricing Supplement in relation thereto to any retail investor in the United Kingdom. For the purposes of this provision:

(a) the expression "retail investor" means a person who is one (or more) of the following:

    (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 ("**EUWA**"); or

(ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 ("**FSMA**") and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or

(iii) not a qualified investor as defined in Article 2 of the Prospectus Regulation as it forms part of domestic law by virtue of the EUWA; and

(b) the expression "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes.

If the Pricing Supplement in respect of any Notes specifies "Prohibition of Sales to UK Retail Investors" as "Not Applicable", each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, that:

(i) in relation to any Notes which have a maturity of less than one year, (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business and (ii) it has not offered or sold and will not offer or sell the Notes other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the Notes would otherwise constitute a contravention of Section 19 of the FSMA) by the Issuer;

(ii) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and

(iii) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the Notes in, from or otherwise involving the United Kingdom.

Republic of Italy

The offering of the Notes has not been registered with the *Commissione Nazionale per le Società e la Borsa* ("**CONSOB**") pursuant to Italian securities legislation and, accordingly, no Notes may be offered, sold or delivered, nor may copies of the Offering Memorandum or of any other document relating to any Notes be distributed in the Republic of Italy, except, in accordance with any Italian securities, tax and other applicable laws and regulations.

Each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, that it has not offered, sold or delivered, and will not offer, sell or deliver any Notes or distribute any copy of this Offering Memorandum or any other document relating to the Notes in Italy except:

(a) to qualified investors (investitori qualificati), as defined pursuant to Article 100 of Legislative Decree No. 58 of February 24, 1998 (the "**Financial Services Act**") and Article 34–ter, first paragraph, letter (b) of CONSOB Regulation No. 11971 of May 14, 1999 (the "**Issuers Regulation**"), all as amended from time to time; or

(b) in other circumstances which are exempted from the rules on public offerings pursuant to Article 100 of the Financial Services Act and Issuers Regulation.

In any event, any offer, sale or delivery of the Notes or distribution of copies of the Offering Memorandum or any other document relating to the Notes in the Republic of Italy under paragraphs (a) or (b) above must be:

(i) made by an investment firm, bank or financial intermediary permitted to conduct such activities in the Republic of Italy in accordance with the Financial Services Act, Legislative Decree No. 385 of September 1, 1993 (the "**Banking Act**") and CONSOB Regulation No. 20307 of February 15, 2018, all as amended from time to time;

(ii) in compliance with Article 129 of the Banking Act, as amended from time to time, and the implementing guidelines of the Bank of Italy, as amended from time to time; and

(iii) in compliance with any other applicable laws and regulations, including any limitation or requirement which may be imposed from time to time by CONSOB or the Bank of Italy or other competent authority.

Japan

The Notes have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended, the "**Financial Instruments and Exchange Act**"). Accordingly, each Dealer represents and agrees, and each further Dealer appointed under the Program will be required to represent and agree, that it has not, directly or indirectly, offered or sold and will not, directly or indirectly, offer or sell any Notes in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and other relevant laws and regulations of Japan.

Korea

The Notes may not be offered, delivered or sold directly or indirectly in Korea or to, or for the account or benefit of, any resident of Korea (as defined in the Foreign Exchange Transactions Act of Korea and the regulations thereunder), or to others for re-offering or resale directly or indirectly in Korea or to, or for the account or benefit of, any resident of Korea, except as otherwise permitted under applicable Korean laws and regulations.

Hong Kong

Each Dealer represents and agrees, and each further Dealer appointed under the Program will be required to represent and agree, that:

(a) it has not offered or sold and will not offer or sell in Hong Kong, by means of any document, any Notes other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the "**SFO**") and any rules made under the SFO; or (b) 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) of Hong Kong (the "**C(WUMP)O**") or which do not constitute an offer to the public within the meaning of the C(WUMP)O; and

(b) it has not issued or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Notes, 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 Notes 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.

Singapore

Each Dealer acknowledges, and each further Dealer appointed under the Program will be required to acknowledge, that the Offering Memorandum has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under the Securities and Futures Act 2001 of Singapore (the "**SFA**"). Accordingly, each Dealer represents and agrees, and each further Dealer appointed under the Program will be required to represent and agree, that it has not offered or sold any Notes or caused the Notes to be made the subject of an invitation for subscription or purchase and will not offer or sell any Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, the Offering Memorandum or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor under Section 274 of the SFA, (ii) to a relevant person 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 of Singapore, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the Notes 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 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 Notes pursuant to an offer made under Section 275 of the SFA except:

(1) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(c)(ii) 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

as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018 of Singapore.

***Notification under Section 309B(1)(c) of the SFA** – Unless otherwise stated in the Pricing Supplement in respect of any Notes, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes to be issued under the Program shall be 'prescribed capital markets products' (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).*

Switzerland

This Offering Circular is not intended to constitute an offer or solicitation to purchase or invest in the Notes described herein. The Notes may not be publicly offered, sold or advertised, directly or indirectly, in, into or from Switzerland and will not be listed on the SIX Swiss Exchange or on any other exchange or regulated trading facility in Switzerland. Neither this Offering Circular nor any other offering or marketing material relating to the Notes constitutes a prospectus as such term is understood pursuant to article 652a or article 1156 of the Swiss Code of Obligations or a listing prospectus within the meaning of the listing rules of the SIX Swiss Exchange or any other regulated trading facility in Switzerland or a simplified prospectus or a prospectus as such term is defined in the Swiss Collective Investment Scheme Act, and neither this Offering Circular nor any other offering or marketing material relating to the Notes may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this Offering Circular nor any other offering or marketing material relating to the offering, nor the Issuer nor the Notes have been or will be filed with or approved by any Swiss regulatory authority. The Notes are not subject to the supervision by any Swiss regulatory authority, e.g., the Swiss Financial Markets Supervisory Authority ("**FINMA**"), and investors in the Notes will not benefit from protection or supervision by such authority.

General

Each Dealer and each further Dealer appointed under the Program will be required to agree that it will (to the best of its knowledge and belief) comply with all applicable securities laws and regulations in force in any jurisdiction in which it purchases, offers, sells or delivers Notes or possesses or distributes the Information Memorandum and will obtain any consent, approval or permission required by it for the purchase, offer, sale or delivery by it of Notes under the laws and regulations in force in any jurisdiction to which it is subject or in which it makes such purchases, offers, sales or deliveries and neither the Issuer nor any other Dealer shall have responsibility therefor.

None of the Issuer and any of the Dealers represents and agrees that Notes may at any time lawfully be sold in compliance with any applicable registration or other requirements in any jurisdiction, or pursuant to any exemption available thereunder, or assumes any responsibility for facilitating any such sale.

With regard to each Tranche, the relevant Dealer will be required to comply with such other restrictions as the Issuer and the relevant Dealer shall agree and as shall be set out in the applicable Pricing Supplement.

GENERAL INFORMATION

Authorization

The update of the Program has been duly authorized by resolutions of the Board of Directors of the Issuer dated December 24, 2021. Each issue of Notes under the Program will be authorized by the Board of Directors of the Issuer at the time of issue or at a meeting held annually to approve the issue of Notes to be issued in the following fiscal year.

Listing of Notes on the Singapore Stock Exchange

Approval in-principle has been received from the Singapore Stock Exchange in connection with the Program and application will be made for the listing and quotation of Notes that may be issued pursuant to the Program and which are agreed at or prior to the time of issue thereof to be so listed on the Singapore Stock Exchange. Such permission will be granted when such Notes have been admitted for listing and quotation on the Singapore Stock Exchange. For so long as any Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, such Notes, if traded on the Singapore Stock Exchange, will be traded in a minimum board lot size of S$200,000 (or its equivalent in foreign currencies).

Documents Available

From the date hereof and so long as Notes are capable of being issued under the Program, copies of the following documents will, when published, be available from the registered office of the Issuer and from the specified office of the Paying Agent for the time being in London:

(i) the constitutional documents (together with English translations) of the Issuer;

(ii) the auditors' reports and the audited consolidated financial statements of the Issuer in respect of the financial years ended December 31, 2019, 2020 and 2021 (together with English translations);

(iii) the most recently published audited consolidated annual financial statements of the Issuer (together with English translations);

(iv) the Program Agreement, the Agency Agreement, the forms of the Global Notes, the Notes in definitive form, the Receipts, the Coupons and the Talons;

(v) a copy of this Offering Memorandum; and

(vi) any future offering memoranda or circulars, prospectuses, information memoranda and supplements including Pricing Supplements (save that a Pricing Supplement relating to an unlisted Note will only be available for inspection by a holder of such Note and such holder must produce evidence satisfactory to the Issuer and the Principal Paying Agent as to its holding of Notes and identity) to this Offering Memorandum and any other documents incorporated herein or therein by reference.

Clearing Systems

The Notes have been accepted for clearance through Euroclear and Clearstream. The appropriate Common Code and ISIN for each Tranche of Bearer Notes allocated by Euroclear and Clearstream will be specified in the applicable Pricing Supplement. In addition, the Issuer may make an application for any Notes in registered form to be accepted for trading in book-entry form by DTC. The CUSIP and/or CINS numbers for each Tranche of Registered Notes, together with the relevant ISIN and common code, will be specified in the applicable Pricing Supplement. If the Notes are to clear through an additional or alternative clearing system the appropriate information will be specified in the applicable Pricing Supplement.

Significant or Material Change

Save as disclosed in this Offering Memorandum, there has been no significant change in the financial or trading position of the Issuer since December 31, 2021, and there has been no material adverse change in the financial position or prospects of the Issuer since December 31, 2021.

Litigation

Save as disclosed in this Offering Memorandum, the Issuer is not and has not been involved in any legal, arbitration, administrative or other proceedings, which might have or have had in the recent past (covering at least the previous 12 months preceding the date of this document) a material adverse effect on the financial position or the operations of the Issuer nor is the Issuer aware of any such proceedings pending or being threatened.

Independent Auditors

The Issuer's audited consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021, included in this Offering Memorandum, have been audited by Ernst & Young Han Young, independent auditors, as stated in their reports appearing herein.

INDEX TO FINANCIAL STATEMENTS

EY 한영
Building a better working world

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Independent auditor's report

The Shareholders and Board of Directors
Korea Expressway Corporation

Opinion

We have audited the consolidated financial statements of Korea Expressway Corporation (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2021 and 2020, and the consolidated statements of profit or loss and other comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2021 and 2020, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Government Accounting Standards for Public Enterprises and Quasi-government Organizations in the Republic of Korea ("Government Accounting Standards").

Basis for opinion

We conducted our audit in accordance with Korean Auditing Standards ("KGAAS"). 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 the Republic of Korea, 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.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Government Accounting 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.

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 KGAAS 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 KGAAS, 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, but not for the purpose of expressing 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 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 those charged with governance 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.

Ernst & Young Han Young

March 22, 2022

This audit report is effective as of March 22, 2022, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the independent auditor's report date to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

KOREA EXPRESSWAY CORPORATION AND ITS SUBSIDIARIES

Consolidated financial statements
for the years ended December 31, 2021 and 2020

"The accompanying consolidated financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Group."

Kim, Jin-sook
Chief Executive Officer
Korea Expressway Corporation

Headquarters: (Address) 77, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, Korea
(Telephone) +82-1588-2504

Korea Expressway Corporation and its subsidiaries
Consolidated statements of financial position
as of December 31, 2021 and 2020
(Korean won in thousands)

	Notes	December 31, 2021	December 31, 2020
Assets			
Current assets:			
Cash and cash equivalents	5,37	₩ 557,477,291	₩ 508,279,724
Financial assets at fair value through profit or loss	7,37	486,340	-
Short-term loans and receivables	10,37	1,467,970	6,774,716
Short-term financial instruments	6,37	60,000,000	45,000,000
Derivatives assets	7,37	15,872,079	5,057,996
Other financial assets	37	419,905,937	323,468,304
Trade and other receivables	8,37,39	349,656,977	297,384,712
Inventories	11	26,566,224	21,092,389
Current tax assets		4,362	5,155,371
Other non-financial assets	12	13,796,838	5,823,464
		1,445,234,018	1,218,036,676
Non-current assets:			
Financial assets at fair value through profit or loss	7,9,37	63,968,359	52,069,653
Financial assets at fair value through other comprehensive income	9,37	22,180,690	21,600,779
Derivatives assets	7,37	165,749,129	47,176,977
Long-term loans and receivables	10,37	36,565,718	25,932,010
Trade and other receivables	8,37	112,907,370	109,234,601
Property and equipment	14	1,132,681,934	1,110,043,210
Investment properties	15	1,695,250,529	1,562,604,806
Intangible assets	16	68,713,607,860	65,029,323,081
Investments in associates and joint ventures	13	4,010,138	3,873,884
Other non-financial assets	12	9,968,296	7,671,922
		71,956,890,023	67,969,530,923
Total assets		**₩ 73,402,124,041**	**₩ 69,187,567,599**

(Continued)

Korea Expressway Corporation and its subsidiaries
Consolidated statements of financial position
as of December 31, 2021 and 2020 (cont'd)
(Korean won in thousands)

	Notes	December 31, 2021	December 31, 2020
Liabilities			
Current liabilities:			
Trade and other payables	17,37,39	₩ 968,227,353	₩ 780,849,364
Financial liabilities at fair value through profit or loss	7,37	105,124,997	-
Current portion of long-term borrowings	18,37	200,000,000	300,000,000
Current portion of bonds	18,37	3,036,359,843	2,852,759,549
Derivatives liabilities	7,37	180,099	9,705,987
Current tax liabilities		3,600,794	7,626,567
Provisions	21	126,934,787	128,795,539
Other non-financial liabilities	23	217,085,451	259,334,421
		4,657,513,324	4,339,071,427
Non-current liabilities:			
Financial liabilities at fair value through profit or loss	7,18,37	6,446,013	113,827,430
Trade and other payables	17,37	205,447,144	204,114,457
Long-term borrowings	18,37	900,000,000	700,000,000
Bonds	18,37	26,731,737,371	24,951,584,499
Derivatives liablities	7,37	23,655,541	106,959,655
Other non-financial liabilities	23	30,231,194	34,412,764
Employee benefits liabilities	20	109,046,085	123,142,185
Provisions	21,41	619,279,949	592,735,475
		28,625,843,297	26,826,776,465
Total liabilities		**33,283,356,621**	**31,165,847,892**
Equity			
Equity attributable to owners of the parent:			
Share capital	1,25	38,656,087,730	36,599,573,730
Share discount		(17,190,811)	(7,979,131)
Retained earnings	26	1,478,171,130	1,455,835,486
Other components of equity	27	1,699,371	(25,710,378)
Non-controlling interests		-	-
Total equity		**40,118,767,420**	**38,021,719,707**
Total liabilities and equity		**₩ 73,402,124,041**	**₩ 69,187,567,599**

The accompanying notes are an integral part of the consolidated financial statements.

Korea Expressway Corporation and its subsidiaries
Consolidated statements of profit or loss and other comprehensive income
for the years ended December 31, 2021 and 2020
(Korean won in thousands, except earnings per share)

	Notes		2021		2020
Revenue	4,28,39	₩	10,535,071,953	₩	9,557,502,707
Cost of sales	35,39		9,585,244,794		8,612,407,790
Gross profit			**949,827,159**		**945,094,917**
Selling and administrative expenses	29,35		331,278,996		322,135,585
Operating profit	4		**618,548,163**		**622,959,332**
Other income	30		143,706,067		126,888,716
Other expenses	30		118,273,881		342,343,362
Other loss,net	31		(6,765,823)		(14,719,388)
Finance income	32,37		230,016,918		173,135,852
Finance costs	33,37		828,975,451		791,213,289
Gain (loss) related to associates and joint ventures	13		1,906,221		(2,549,606)
Profit (loss) before income tax			**40,162,214**		**(227,841,745)**
Income tax expense (benefit)	34		**6,527,080**		**(255,304,048)**
Profit for the year			**33,635,134**		**27,462,303**
Other comprehensive income for the year, net of tax					
Items that will not be reclassified to profit or loss in subsequent periods:					
Remeasurements of defined benefit plans	20		2,279,329		(11,449,427)
Share of other comprehensive loss of associates and joint ventures	13		(70,157)		(70,157)
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	9		536,934		(262,238)
			2,746,106		(11,781,822)
Items that may be reclassified to profit or loss in subsequent periods:					
Gains on hedging instruments in cash flow hedges	7		26,942,971		62,294,966
Share of other comprehensive income of associates and joint ventures	13		-		58,724
			26,942,971		62,353,690
Total comprehensive income for the year		₩	**63,324,211**	₩	**78,034,171**
Profit for the year attributable to:					
Owners of the parent			33,635,134		27,462,303
Non-controlling interests			-		-
			33,635,134		27,462,303
Total comprehensive income for the year attributable to:					
Owners of the parent			63,324,211		78,034,171
Non-controlling interests			-		-
			63,324,211		78,034,171
Earnings per share:	36				
Basic earnings per share		₩	9	₩	8
Diluted earnings per share		₩	9	₩	8

The accompanying notes are an integral part of the consolidated financial statements.

Korea Expressway Corporation and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2021 and 2020
(Korean won in thousands)

	Share capital and share discount	Retained earnings	Other components of equity	Equity attributable to owners of the parent	Non-controlling interests	Total equity
As of January 1, 2020	₩ 34,930,304,287	₩ 1,485,204,033	₩ (87,731,673)	₩ 36,327,776,647	₩ -	₩ 36,327,776,647
Total comprehensive income for the year :						
Profit for the year	-	27,462,303	-	27,462,303	-	27,462,303
Other comprehensive income	-	(11,449,427)	62,021,295	50,571,868	-	50,571,868
	-	16,012,876	62,021,295	78,034,171	-	78,034,171
Transactions with owners of the parent recognized directly in equity:						
Capital increase by issuing new shares	1,662,319,000	-	-	1,662,319,000	-	1,662,319,000
Dividends paid	-	(38,430,980)	-	(38,430,980)	-	(38,430,980)
Share discount	(7,979,131)	-	-	(7,979,131)	-	(7,979,131)
	1,654,339,869	(38,430,980)	-	1,615,908,889	-	1,615,908,889
Amortization of share discount	6,950,443	(6,950,443)	-	-	-	-
As of December 31, 2020	₩ 36,591,594,599	₩ 1,455,835,486	₩ (25,710,378)	₩ 38,021,719,707	₩ -	₩ 38,021,719,707
As of January 1, 2021	₩ 36,591,594,599	₩ 1,455,835,486	₩ (25,710,378)	₩ 38,021,719,707	₩ -	₩ 38,021,719,707
Total comprehensive income for the year :						
Profit for the year	-	33,635,134	-	33,635,134	-	33,635,134
Other comprehensive income	-	2,279,329	27,409,749	29,689,078	-	29,689,078
	-	35,914,463	27,409,749	63,324,212	-	63,324,212
Transactions with owners of the parent recognized directly in equity:						
Capital increase by issuing new shares	2,056,514,000	-	-	2,056,514,000	-	2,056,514,000
Dividends paid	-	(13,578,818)	-	(13,578,818)	-	(13,578,818)
Share discount	(9,211,680)	-	-	(9,211,680)	-	(9,211,680)
	2,047,302,320	(13,578,818)	-	2,033,723,502	-	2,033,723,502
As of December 31, 2021	₩ 38,638,896,919	₩ 1,478,171,131	₩ 1,699,371	₩ 40,118,767,421	₩ -	₩ 40,118,767,421

The accompanying notes are an integral part of the consolidated financial statements.

Korea Expressway Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2021 and 2020
(Korean won in thousands)

		2021		2020
Cash flows from operating activities:				
Profit for the year	₩	33,635,134	₩	27,462,303
Adjustments to reconcile profit for the year to net cash provided by operating activities:				
Bad debt expenses		2,226,105		2,638,102
Other bad debt expenses		232,282		646,007
Loss (gain) on valuation of financial instruments at fair value through profit or loss, net		965,216		(1,394,372)
Loss (gain) on disposal of financial instruments, net		472,500		(11,911)
Loss (gain) on valuation of derivative instruments, net		(183,964,110)		102,620,640
Loss (gain) on transaction of derivative instruments, net		(16,412,000)		3,520,000
Loss on hedged item related to fair value hedge		5,102,845		3,088,131
Gain on disposal of property and equipment, net		(976,128)		(546,603)
Depreciation		187,094,430		177,729,805
Loss on disposal of investment properties, net		3,777,262		5,195,821
Gain on disposal of intangible assets		(11,688,416)		(5,592,128)
Amortization		1,713,213,145		1,588,287,168
Interest expenses		602,490,797		626,140,229
Income tax expense (benefit)		6,527,080		(255,304,048)
Loss (gain) on foreign currency translations, net		182,876,013		(103,098,049)
Employee benefits		139,804,121		133,433,772
Retirement benefits		65,978,817		61,016,482
Share of loss (profit) of associates and joint ventures		(206,411)		2,549,606
Dividend income		(230,600)		(161,345)
Interest income		(9,183,483)		(9,858,337)
Gain on contribution of assets		(2,903,896)		(13,765,608)
Income from incidental business		(6,573,534)		(8,402,974)
Increase in provisions		91,675,034		287,166,440
Reversal of provisions		(65,021,636)		(20,193,651)
Reversal of other allowance for doubtful accounts		(348,859)		-
Gain on other accounts		(584,641)		(4,490,716)
Gain on disposal of investments in associates		(1,699,810)		-
	₩	2,702,642,123	₩	2,571,212,461

(Continued)

Korean Expressway Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2021 and 2020 (cont'd)
(Korean won in thousands)

	2021	2020
Cash flows from operating activities:		
Changes in operating assets and liabilities:		
Short-term loans	₩ 5,306,746	₩ (1,610,690)
Other current financial assets	(96,437,633)	(160,174,488)
Other accounts receivable	(54,612,191)	(56,371,107)
Accrued income	(20,498)	12,334
Short-term deposits	717,019	(3,079,867)
Inventories	(5,473,835)	494,291
Short-term advance payments	34,752	(34,752)
Short-term prepaid expenses	(6,990,670)	(421,653)
Greenhouse gas emissions rights	(31,209)	134,843
Long-term loans	(10,633,709)	1,686,979
Long-term deposits	648,777	(5,947,434)
Long-term prepaid expenses	(545,130)	(620,946)
Short-term other accounts payable	187,236,203	(35,682,791)
Short-term accrued expenses	(3,112,261)	9,841,729
Short-term leasehold deposits received	(30,720,165)	39,487,772
Short-term other deposits received	(5,591,677)	341,033
Short-term advances received	(48,416,646)	185,588,946
Short-term unearned revenue	(504,077)	2,148,177
Withholdings	(1,424,742)	(53,936,325)
Current portion of provision for employee benefits	(127,945,130)	(114,438,248)
Provision for GHG emission	(697,992)	(1,357,339)
Long-term leasehold deposits received	25,340,179	(230,737,474)
Long-term unearned revenue	2,862,042	(2,859,375)
Retirement benefits paid	(1,641,306)	(1,811,506)
Contributions to plan assets	(77,293,514)	(93,946,036)
Other long-term employee benefits	(12,017,059)	(10,234,185)
Increase in government grants for consignment management service	309,810,189	338,880,660
Decrease in government grants for consignment management service	(275,230,871)	(303,301,591)
	(227,384,408)	(497,949,043)
Dividends received	230,600	161,345
Interest paid	(590,431,933)	(931,616,706)
Interest received	9,065,498	9,387,972
Income taxes refunded	2,224,723	126,155,349
Net cash provided by operating activities	₩ 1,929,981,737	₩ 1,304,813,681

(Continued)

Korea Expressway Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2021 and 2020 (cont'd)
(Korean won in thousands)

	2021	2020
Cash flows from investing activities:		
Proceeds from disposals of property and equipment	₩ 2,095,289	₩ 3,134,870
Proceeds from disposals of investment property	75,396	46,657
Proceeds from disposals of intangible assets	27,263,788	7,318,129
Proceeds from disposal of investments in associates and joint ventures	1,699,810	-
Acquisition of financial assets at fair value through other comprehensive income	(42,977)	(59,888)
Acquisition of financial assets at fair value through profit or loss, net	(15,606,682)	(10,157,099)
Acquisition of property and equipment	(145,271,799)	(156,323,557)
Acquisition of short-term financial instruments	(15,000,000)	(15,000,000)
Acquisition of investment properties	(194,625,463)	(207,492,943)
Acquisition of intangible assets	(5,413,801,503)	(4,774,733,313)
Net cash used in investing activities	(5,753,214,141)	(5,153,267,144)
Proceeds from long-term borrowings	400,000,000	100,000,000
Proceeds from bonds	4,630,939,789	4,865,435,389
Proceeds from capital increase by issuing new shares	2,047,302,320	1,654,339,869
Repayments of current portion of borrowings	(300,000,000)	-
Repayments of bonds	(2,853,920,500)	(2,923,108,089)
Repayments of lease liabilities	(4,162,977)	(4,096,284)
Dividends paid	(13,578,818)	(38,430,981)
Net cash provided by financing activities	3,906,579,814	3,654,139,904
Net increase in cash and cash equivalents	83,347,410	(194,313,559)
Net foreign exchange difference	429,475	759,053
Cash and cash equivalents at the beginning of the year	856,597,207	1,050,151,713
Cash and cash equivalents at the end of the year before government grants for consignment management service	940,374,092	856,597,207
Less: government grants for consignment management service	(382,896,801)	(348,317,483)
Cash and cash equivalents at the end of the year	₩ **557,477,291**	₩ **508,279,724**

The accompanying notes are an integral part of the consolidated financial statements.

1. General

Korea Expressway Corporation (the "Company") was established on February 15, 1969, under the *Korea Expressway Corporation Act*. The Company is engaged in the construction and operation of an expressway network in the Republic of Korea. The Company generates its revenue primarily from tolls collected from motorists for the use of the expressways managed by the Company. The Company also receives lease payments paid by operations of service areas and oil stations located at various points along the expressways and fees from certain services for the Korean Government (the "Government"), including supervision of the government construction projects in various locations adjacent to the expressways.

As of December 31, 2021, the Company's shareholders are as follows:

Shareholders	Number of shares	Ownership (%)
Ministry of Land, Infrastructure and Transport	3,392,849,903	87.77
Korea EXIM Bank	328,714,464	8.50
Korea Development Bank	92,628,550	2.40
Korea Asset Management Corporation	35,842,408	0.93
Korea Housing Finance Corporation	15,000,000	0.39
Kookmin Bank	573,448	0.01
	3,865,608,773	100.00

The Group

Details of the Company and its subsidiaries (collectively referred to as the "Group") as of December 31, 2021 and 2020 are as follows (Korean won in millions):

As of December 31, 2021:

Company	Country of incorporation	Business area	Assets	Liabilities	Sales	Profit for the year
Korea Expressway Corporation	Korea	Construction and management of roads	₩ 73,391,383	₩ 33,266,842	₩ 10,534,309	₩ 30,453
Korea Expressway Corporation Facility Management Co., Ltd.	Korea	Building(facilities) and maintenance, etc.	3,371	2,544	16,019	48
Korea Expressway Corporation Service Co., Ltd.	Korea	Toll road and facility usage fee	69,340	41,217	328,182	16,167

As of December 31, 2020:

Company	Country of incorporation	Business area	Assets	Liabilities	Sales	Profit for the year
Korea Expressway Corporation	Korea	Construction and management of roads	₩ 69,181,607	₩ 31,149,822	₩ 9,556,816	₩ 30,535
Korea Expressway Corporation Facility Management Co.,Ltd.	Korea	Building(facilities) and maintenance, etc.	3,454	2,698	15,098	293
Korea Expressway Corporation Service Co.,Ltd.	Korea	Toll road and facility usage fee	54,585	43,526	310,822	8,059

2. Summary of significant accounting policies

Basis of consolidation

The consolidated financial statements comprise the financial statements of the Group as of December 31, 2021. Control is obtained when the Group is exposed to, or has rights to, variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if, and only if, the Group has:

- Power over the investee (i.e., existing rights that give it the current ability to direct the relevant activities of the investee)
- Exposure, or rights, to variable returns from its involvement with the investee
- The ability to use its power over the investee to affect its returns

Generally, there is a presumption that a majority of voting rights results in control. When the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- The contractual arrangement(s) with the other vote holders of the investee
- Rights arising from other contractual arrangements
- The Group's voting rights and potential voting rights

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (OCI) are attributed to the owners of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to ensure conformity with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control of a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity, while any resultant gain or loss is recognized in profit or loss. Any investment retained in the former subsidiary is recognized at its fair value.

Basis of preparation

The consolidated financial statements of the Group have been prepared in accordance with Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea ("Government Accounting Standards") pursuant to the *Act on the Management of Public Institutions and the Decree on Accounting for Public Corporations and Quasi-governmental Institutions,* which mandates application of Korean International Accounting Standards ("KIFRS") enacted by the *Act on External Audit of Stock Companies* where specific accounting treatments are not prescribed by Government Accounting Standards. The accompanying consolidated financial statements have been translated into English from Korean financial statements. In the event of any differences in interpreting the financial statements or the independent auditor's report thereon, Korean version, which is used for regulatory reporting purposes, shall prevail.

The Group adopted the KIFRS from the reporting period beginning on January 1, 2011. The date of transition to KIFRS according to KIFRS 1101, *First-time Adoption of Korean International Financial Reporting Standards*, was January 1, 2010.

2. Summary of significant accounting policies (cont'd)

1) Application of Government Accounting Standards

- Accounting Treatment for Assets Consigned

The Group represents assets that have been entrusted for consignment and management by third parties, such as the Government, by subtracting the assets from the acquired assets.

- Remaining government subsidies and Consigned project expenses

The Group has incurred government subsidies related to its own business carried over to the next year and deducts it from cash and cash equivalents in accordance with Article 44-2 of public corporations and quasi-governmental organizations.

- Recognition of Revenue and Expenses related to Consignment Management

The Group recognizes funds received from the Ministry of Land, Infrastructure and Transport and others for consignment management services as revenue and expenses or assets and liabilities as the associated project progresses. The Group does not offset each account.

- Contribution to the Employee Welfare Fund

The Group contributes to the employee welfare fund under the Employee Welfare Fund Act, which is recognized as selling and administrative expenses.

The significant accounting policies used for the preparation of the current consolidated financial statements are consistent with those applied to the consolidated financial statements for the year ended December 31, 2020, except for the effect associated with the adoption of the Standards and Interpretations described below.

2) Standards issued but not yet effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's consolidated financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

Amendments to KIFRS 1001 *Presentation of Financial Statements* – Classification of Liabilities as Current or Non-current

The amendments to paragraphs 69 to 76 of KIFRS 1001 specify the requirements for classifying liabilities as current or non-current. The amendments clarify:

- What is meant by a right to defer settlement
- That a right to defer must exist at the end of the reporting period
- That classification is unaffected by the likelihood that an entity will exercise its deferral right
- That only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification

The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and must be applied retrospectively. The Group is currently assessing the impact the amendments will have on current practice and whether existing loan agreements may require renegotiation.

Amendments to KIFRS 1103 *Business Combinations* – Reference to the Conceptual Framework

The amendments are intended to replace a reference to the Framework for the Preparation and Presentation of Financial Statements, issued in 1989, with a reference to the Conceptual Framework for Financial Reporting issued in March 2018 without significantly changing its requirements.
The Board also added an exception to the recognition principle of KIFRS 1103 to avoid the issue of potential 'day 2' gains or losses arising for liabilities and contingent liabilities that would be within the scope of KIFRS 1037 or KIFRS 2121 *Levies,* if incurred separately. At the same time, the Board decided to clarify existing guidance in KIFRS 1103 for contingent assets that would not be affected by replacing the reference to the Framework for the Preparation and Presentation of Financial Statements. The amendments are effective for annual reporting periods beginning on or after January 1, 2022 and apply prospectively.

2. Summary of significant accounting policies (cont'd)

Amendments to KIFRS 1016 *Property, Plant and Equipment* – Proceeds before Intended Use
The amendment prohibits entities deducting from the cost of an item of property, plant and equipment, any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognizes the proceeds from selling such items, and the costs of producing those items, in profit or loss.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 and must be applied retrospectively to items of property, plant and equipment made available for use on or after the beginning of the earliest period presented when the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

Amendments to KIFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets* – Costs of Fulfilling Onerous Contracts
The amendments to KIFRS 1037 specify which costs an entity needs to include when assessing whether a contract is onerous or loss-making. The amendments apply a "directly related cost approach". The costs that relate directly to a contract to provide goods or services include both incremental costs and an allocation of costs directly related to contract activities. General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. The amendments are effective for annual reporting periods beginning on or after January 1, 2022. The Group will apply these amendments to contracts for which it has not yet fulfilled all its obligations at the beginning of the annual reporting period in which it first applies the amendments.

Amendments to KIFRS 1041 *Agriculture* – Fair Value Measurement
The amendment removes the requirement in paragraph 22 of KIFRS 1041 for entities to exclude cash flows for taxation when measuring the fair value of assets within the scope of KIFRS 1041. The amendments are effective for annual reporting periods beginning on or after January 1, 2022. Early application is permitted. As the Group does not engage in agriculture, the amendments are not expected to have a material impact on the Group.

Amendments to KIFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* – Definition of Accounting Estimates
The amendments clarify the distinction between changes in accounting estimates and changes in accounting policies and the correction of errors. Also, they clarify how entities use measurement techniques and inputs to develop accounting estimates. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and apply to changes in accounting policies and changes in accounting estimates that occur on or after the start of that period. Earlier application is permitted as long as this fact is disclosed. The amendments are not expected to have a material impact on the Group.

Amendments to KIFRS 1001 *Presentation of Financial Statements* - Disclosure of Accounting Policies
The amendments provide guidance and examples to help entities apply materiality judgements to accounting policy disclosures. The amendments aim to help entities provide accounting policy disclosures that are more useful by replacing the requirement for entities to disclose their 'significant' accounting policies with a requirement to disclose their 'material' accounting policies and adding guidance on how entities apply the concept of materiality in making decisions about accounting policy disclosures. The amendments to KIFRS 1001 are applicable for annual periods beginning on or after January 1, 2023 with earlier application permitted. The amendments are not expected to have a material impact on the Group.

Amendments to KIFRS 1012 *Income Taxes* – Narrowing the scope of the initial recognition exception of deferred taxes
The amendments narrowed the scope of the initial recognition exemption so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary difference, thus to resolve accounting diversity in the recognizing of deferred tax assets and liabilities. Paragraphs 15 and 24 (initial recognition exemption of deferred taxes) of KIFRS 1012 were amended to include an additional condition (3) where a deferred tax asset and liability shall be recognized for a temporary difference that arises on initial recognition of an asset or liability in a single transaction if that transaction give rise to equal amounts of taxable and deductible temporary differences. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 with earlier adoption permitted. The amendments are not expected to have a material impact on the Group.

2. Summary of significant accounting policies (cont'd)

Annual Improvements 2018-2020 Cycle

KIFRS 1101 *First-time Adoption of International Financial Reporting Standards* – Subsidiary as a first-time adopter
The amendment permits a subsidiary that elects to apply paragraph D16(1) of KIFRS 1101 to measure cumulative translation differences using the amounts reported by the parent, based on the parent's date of transition to KIFRS. This amendment is also applied to an associate or joint venture that elects to apply paragraph D16(1) of KIFRS 1101. The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted.

KIFRS 1109 *Financial Instruments* – Fees in the '10 per cent' test for derecognition of financial liabilities
The amendment clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. An entity applies the amendment to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment.
The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. The Group will apply the amendments to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

3) New and amended standards and interpretations

The Group applied for the first-time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2021. The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

Amendments to KIFRS 1109, KIFRS 1039, KIFRS 1107, KIFRS 1104 and KIFRS 1116 – Interest Rate Benchmark Reform – Phase 2
The amendments provide temporary reliefs for responding the case where the replacement of interbank offered rates (IBORs) with alternative, nearly risk-free interest rates (RFRs) makes the impact on the financial reporting. The amendments include the following practical expedients:

- In case of changes to contracts, or changes to cash flows due directly to the Reform, treat them as changes to a floating interest rate, akin to a movement in a market rate of interest;
- Permit changes required by IBOR Reform to be made to hedge designations and hedge documentation without continuing hedge relationships; and
- Provide temporary relief to entities from having to meet the separately identifiable requirement when an RFR instrument is designated as a hedge of a risk component.

These amendments had no material impact on the consolidated financial statements of the Group. The Group intends to use the practical expedients in future periods if they become applicable.

Amendments to KIFRS 1116 Covid – 19 Related Rent Concessions beyond June 30, 2021
On May 28, 2020, the IASB issued Covid-19-Related Rent Concessions - amendment to KIFRS 1116 Leases.
The amendments provide relief to lessees from applying KIFRS 1116 guidance on lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic. As a practical expedient, a lessee may elect not to assess whether a Covid-19 related rent concession from a lessor is a lease modification. A lessee that makes this election accounts for any change in lease payments resulting from the Covid-19 related rent concession the same way it would account for the change under KIFRS 1116 if the change were not a lease modification. The amendment was intended to apply until June 30, 2021, but as the impact of the Covid-19 pandemic is continuing, on March 31, 2021, the IASB extended the period of application of the practical expedient to June 30, 2022. The amendment applies to annual reporting periods beginning on or after April 1, 2021. The Group has not received Covid-19-related rent concessions, but plans to apply the practical expedient if it becomes applicable within allowed period of application.

2. Summary of significant accounting policies (cont'd)

Significant accounting policies

Significant accounting policies applied to the preparation of the consolidated financial statements are as follows. Unless otherwise stated, the accounting policies have been continuously applied in the stated accounting periods.

Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in administrative expenses.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Contingent consideration classified as an asset or liability that is a financial instrument is measured at fair value with the changes in fair value recognized in profit or loss or other comprehensive income in accordance with KIFRS 1109. Contingent consideration classified as equity is not remeasured, and its subsequent settlement is accounted for within equity. Other contingent consideration that is not within the scope of KIFRS 1109 is measured at fair value at each reporting date with changes in fair value recognized in accordance with the appropriate accounting standards.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a cash-generating unit (CGU) and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the CGU retained.

Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

2. Summary of significant accounting policies (cont'd)

***Investments in associates and joint ventures* (cont'd)**

The considerations made in determining significant influence or joint control are similar to those necessary to determine control over subsidiaries. The Group's investments in its associate and joint venture are accounted for using the equity method.

Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the associate or joint venture since the acquisition date. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is not tested for impairment separately.

The consolidated statement of profit or loss and other comprehensive income reflects the Group's share of the results of operations of the associate or joint venture. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognized directly in the equity of the associate or joint venture, the Group recognizes its share of any changes, when applicable, in the consolidated statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the associate or joint venture are eliminated to the extent of the interest in the associate or joint venture.

The aggregate of the Group's share of profit or loss of an associate and a joint venture is shown on the face of the consolidated statement of profit or loss and other comprehensive income outside operating profit and represents profit or loss after tax and non-controlling interests in the subsidiaries of the associate or joint venture. The financial statements of the associate or joint venture are prepared for the same reporting period as the Group. When necessary, adjustments are made to bring the accounting policies in line with those of the Group.

After application of the equity method, the Group determines whether it is necessary to recognize an impairment loss on its investment in its associate or joint venture. At each reporting date, the Group determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value, and then recognizes the loss as 'Share of profit of an associate and a joint venture' in the consolidated statement of profit or loss and other comprehensive income.

Upon loss of significant influence over the associate or joint control over the joint venture, the Group measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the associate or joint venture upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognized in profit or loss.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

When a Group entity undertakes its activities under joint operations, the Group as a joint operator recognizes in relation to its interest in a joint operation:

- its assets, including its share of any assets held jointly;
- its liabilities, including its share of any liabilities incurred jointly;
- its revenue from the sale of its share of the output arising from the joint operation;
- its share of the revenue from the sale of the output by the joint operation; and
- its expenses, including its share of any expenses incurred jointly.

The results of operations and assets and liabilities of joint ventures are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with KIFRS 1105.

2. Summary of significant accounting policies (cont'd)

Investments in associates and joint ventures **(cont'd)**

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of a joint venture recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

When the Group transacts with a joint venture of the Group, profits and losses resulting from the transactions with the joint venture are recognized in the Group's consolidated financial statements only to the extent of interests in the joint venture that are not related to the Group.

Revenue from contracts with customers

The Group operates a project to provide road installation, management, and road-related unit services. Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. The Group determined itself as the principal in contracts with customers as it controls promised goods or services in providing goods or services to the customer.

Leases

The Group assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

1) Group as a lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognizes lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

i) Right-of-use assets

The Group recognizes right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets.

If ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

The right-of-use assets are also subject to impairment. Refer to the accounting policies in section, Impairment of property and equipment and intangible assets other than goodwill.

ii) Lease liabilities

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognized as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

2. Summary of significant accounting policies (cont'd)

***Leases* (cont'd)**

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

The Group's lease liabilities are included in interest-bearing loans and borrowings.

iii) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases of machinery, furniture and fixtures, etc. (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office supplies that are considered to be low value. Lease payments on short-term leases and leases of low value assets are recognized as expense on a straight-line basis over the lease term.

2) Group as a lessor

Leases in which the Group does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in revenue in the consolidated statement of profit or loss and other comprehensive income due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned.

Foreign currencies

The consolidated financial statements are presented in the currency of the primary economic environment in which the entity operates (its functional currency). For the purpose of the consolidated financial statements, the results of operations and financial position of each entity are expressed in Korean won, which is the functional currency of the Group and the presentation currency for the consolidated financial statements.

In preparing the financial statements of the entities, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are translated using the closing rate. Non-monetary items carried at fair value in foreign currencies, shall be translated using the exchange rates at the date when the fair value was measured. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are recognized in profit or loss in the period in which they arise, except for:

- exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;
- exchange differences arising from transactions to avoid specific foreign currency risk;
- exchange differences on monetary items that is receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur in the foreseeable future (therefore forming part of the net investment in the foreign operation). Such exchange differences are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

2. Summary of significant accounting policies (cont'd)

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

Government grants

Government grants are recognized when there is reasonable assurance that the grant will be received and all attached conditions will be complied with.

The benefit of a government loan at a below-market rate of interest is treated as a government grant. The benefit of the below-market rate of interest shall be measured as the difference between the initial carrying value of the loan determined in accordance with KIFRS 1109 and the proceeds received.

Government grants related to assets shall be presented in the consolidated statement of financial position by deducting the grant in arriving at the carrying amount of the asset. The grant is recognized in profit or loss over the life of a depreciable asset as a reduced depreciation expense.

Grants related to income shall be recognized as income on a systematic basis over the periods in which the entity recognizes as expenses that related costs for which the grants are intended to compensate. A government grant that becomes receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the entity with no future related costs shall be recognized in profit or loss of the period in which it becomes receivable.

Retirement and termination benefits

In relation to the defined benefit plan, the defined benefit obligation is calculated by performing an actuarial evaluation at the end of each reporting period using the Projected Unit Credit Method by an independent actuary.

Remeasurements, comprising actuarial gains and losses, any change in the effect of the asset ceiling (if applicable) and the return on plan assets (excluding interest), are recognized in other comprehensive income during the period in which they occur and are immediately reflected in the consolidated statement of financial position. Remeasurements recognized in other comprehensive income are transferred directly to retained earnings and will not be reclassified to profit or loss.

Past service cost is recognized in profit or loss in the period of a plan amendment. Net interest is determined by multiplying the discount rate at the beginning of the period by the net defined benefit liability or asset. Defined benefit costs are composed of service cost (current service cost, past service cost and any gain or loss on settlement.), net interest expense (income) and remeasurement.

The Group presents the service cost and net interest expense (income) in profit or loss and the remeasurement in other comprehensive income. Curtailment gains and losses are accounted for as past service costs.

Defined benefit obligation recognized in the consolidated statement of financial position represents the actual deficit or surplus in the Group's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

The Group shall recognize a liability for termination benefits at the earlier of the following dates:
(a) when the Group can no longer withdraw the offer of those benefits; and
(b) when the Group recognizes costs for a restructuring

2. Summary of significant accounting policies (cont'd)

Retirement and termination benefits (cont'd)

Discretionary contributions made by employees or third parties reduce service cost upon payment of these contributions to the plan. When the formal terms of the plans specify that there will be contributions from employees or third parties, the accounting depends on whether the contributions are linked to service, as follows:

If the contributions are not linked to services (e.g., contributions are required to reduce a deficit arising from losses on plan assets or from actuarial losses), they are reflected in the remeasurement of the net defined benefit liability (asset).

If contributions are linked to services, they reduce service costs. For the amount of contribution that is dependent on the number of years of service, the entity reduces service cost by attributing the contributions to periods of service using the attribution method required by KIFRS 1019 paragraph 70 for the gross benefits. For the amount of contribution that is independent of the number of years of service, the entity reduces service cost in the period in which the related service is rendered in accordance with KIFRS 1019 paragraph 70.

Income taxes

Income tax expense consists of current tax and deferred tax.

1) Current tax

Current tax is calculated based on taxable income for the current period. Taxable profit differs from profit before income tax in the consolidated statement of profit or loss and other comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. Current tax liabilities shall be measured using the tax rates that have been enacted or substantively enacted by the end of the reporting period.

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent it is probable that there will be sufficient taxable profits against which the benefits of the temporary differences can be utilized and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

2. Summary of significant accounting policies (cont'd)

***Income taxes* (cont'd)**

Deferred tax assets and liabilities are offset if, and only if, the Group has a legally enforceable right to set off current tax assets against current tax liabilities and the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities that intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

For the purpose of measuring deferred tax liabilities and deferred tax assets for investment properties that are measured using the fair value model, the carrying amounts of such properties are presumed to be recovered entirely through sale, unless the presumption is rebutted; the presumption is rebutted when the investment property is depreciable and is held within a business model whose objective is to consume substantially all of the economic benefits embodied in the investment properties over time, rather than through sale.

3) Current and deferred taxes for the year

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

Property and equipment

Property and equipment are initially measured at cost and, after initial recognition, are carried at cost, less accumulated depreciation and accumulated impairment losses. The cost of property and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent to initial recognition, an item of property and equipment shall be carried at its cost, less any accumulated depreciation and any accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of property and equipment at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

The Group does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful lives of the assets shown below:

	Estimated useful lives (years)
Buildings	8–30
Structures	8–30
Machineries	4–10
Information technology equipment	4–10
Vehicles	4–6
Others	4–8

2. Summary of significant accounting policies (cont'd)

***Property and equipment* (cont'd)**

If each part of an item of property and equipment has a cost that is significant in relation to the total cost of the item, it is depreciated separately.

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting date and adjusted, if appropriate. The change is accounted for as a change in an accounting estimate.

An item of property and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the property and equipment (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property and equipment is derecognized.

Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation (including property under construction for such purposes). Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are reported at cost less accumulated depreciation and accumulated impairment losses.

Subsequent costs are recognized in carrying amount of an asset or as a separate asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

While land is not depreciated, all other investment property is depreciated based on the respective assets' estimated useful lives of 8–30 years using the straight-line method.

Depreciation methods, residual values and useful lives of investment properties are reviewed at the end of each reporting period, and if it is deemed appropriate to change them, they are accounted for as changes in accounting estimates.

An investment property is derecognized upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from its disposal. Any gain or loss arising on derecognition of the investment property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the investment property is derecognized.

Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at cost, less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period, and if it is deemed appropriate to change them, they are accounted for as changes in accounting estimates. Intangible assets with indefinite useful lives that are acquired separately are carried at cost less accumulated impairment losses.

Amortization expense is computed on the estimated useful lives of the assets shown below:

	Estimated useful lives (years)	Amortization
Industrial property rights	5–50	Straight-line method
Software	4–5	Straight-line method
Development costs	5	Straight-line method
Expressway operating rights	-	Investment cost recovery method

2. Summary of significant accounting policies (cont'd)

Intangible assets (cont'd)

2) Internally generated intangible assets - research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

Expenditure arising from development (or from the development phase of an internal project) is recognized as an intangible asset if, and only if, the development project is designed to produce new or substantially improved products, and the Group can demonstrate the technical and economic feasibility and measure reliably the resources attributable to the intangible asset during its development.

The amount initially recognized for internally generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria. Where no internally generated intangible asset can be recognized, development expenditure is recognized in profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally generated intangible assets are reported at cost, less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

3) Intangible assets acquired in a business combination

Intangible assets that are acquired in a business combination are recognized separately from goodwill and are initially recognized at their fair value at the acquisition date (which is regarded as their cost). Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

4) Derecognition of intangible assets

An intangible asset is derecognized on disposal or when no future economic benefits are expected from its use. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in profit or loss when the asset is derecognized.

Impairment of property and equipment and intangible assets other than goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its property and equipment and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value less costs to sell or value in use. If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount and the reduced amount is recognized in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or the cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

2. Summary of significant accounting policies (cont'd)

Inventories

Inventories are stated at the lower of cost or net realizable value. Cost of inventories, except for those in transit, are measured under the weighted-average method and consists of the purchase price, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realizable value represents the estimated selling price for inventories, less all estimated costs of completion and costs necessary to make the sale.

When inventories are sold, the carrying amount of those inventories is recognized as an expense (cost of sales) in the period in which the related revenue is recognized. The amount of any write-down of inventories to net realizable value and all losses of inventories is recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, is recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

Provisions

A provision shall be recognized when:
(a) an entity has a present obligation (legal or constructive) as a result of a past event;
(b) it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and
(c) a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material). The discount rate used is a pretax rate that reflects current market assessments of the time value of money and the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage is recognized in profit or loss as finance costs.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

Financial instruments – initial recognition and subsequent measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

1) Financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortized cost, fair value through other comprehensive income (OCI), and fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under KIFRS 1115.

2. Summary of significant accounting policies (cont'd)

Financial instruments – initial recognition and subsequent measurement **(cont'd)**

In order for a financial asset to be classified and measured at amortized cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:
- Financial assets at amortized cost (debt instruments)
- Financial assets at fair value through OCI with recycling of cumulative gains and losses (debt instruments)
- Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments)
- Financial assets at fair value through profit or loss

Financial assets at amortized cost (debt instruments)
The Group measures financial assets at amortized cost if both of the following conditions are met:
- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows, and
- The contractual 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

Financial assets at amortized cost are subsequently measured using the effective interest rate (EIR) method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, modified or impaired.

Financial assets at fair value through OCI (debt instruments)
The Group measures debt instruments at fair value through OCI if both of the following conditions are met:
- The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling, and
- The contractual 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

For debt instruments at fair value through OCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the statement of profit or loss and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss.

The Group's debt instruments at fair value through OCI is included in debt instruments classified as non-current assets.

Financial assets designated at fair value through OCI (equity instruments)
Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under KIFRS 1032 *Financial Instruments*: *Presentation* and are not held for trading. The classification is determined on an instrument-by-instrument basis.

2. Summary of significant accounting policies (cont'd)

Financial assets designated at fair value through OCI (equity instruments) **(cont'd)**

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the consolidated statement of profit or loss and other comprehensive income when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at fair value through OCI are not subject to impairment assessment.

The Group can elect to classify irrevocably its non-listed equity investments under this category.

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at fair value through profit or loss, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortized cost or at fair value through OCI, as described above, debt instruments may be designated at fair value through profit or loss on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with net changes in fair value recognized in profit or loss.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if:
(a) the economic characteristics and risks are not closely related to the host;
(b) a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
(c) the hybrid contract is not measured at fair value through profit or loss.

Embedded derivatives are measured at fair value with changes in fair value recognized in profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss category.

Financial assets at fair value through profit or loss(cont'd)

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e., removed from the Group's consolidated statement of financial position) when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Group continues to recognize the transferred asset to the extent of its continuing involvement. In that

2. Summary of significant accounting policies (cont'd)

***Financial instruments – initial recognition and subsequent measurement* (cont'd)**

case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

2) Impairment of financial assets

Further disclosures relating to impairment of financial assets are also provided in the following notes:
- Disclosures for significant assumptions
- Debt instruments at fair value through OCI
- Trade receivables, including contract assets

The Group recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

For debt instruments at fair value through OCI, the Group applies the low credit risk simplification. At every reporting date, the Group evaluates whether the debt instrument is considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the internal credit rating of the debt instrument. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

The Group's debt instruments at fair value through OCI comprise solely of quoted bonds that are graded in the top investment category and, therefore, are considered to be low credit risk investments. It is the Group's policy to measure ECLs on such instruments on a 12-month basis. However, when there has been a significant increase in credit risk since origination, the allowance will be based on the lifetime ECL. The Group uses the ratings from a credit rating agency both to determine whether the debt instrument has significantly increased in credit risk and to estimate ECLs.

The Group considers a financial asset in default when contractual payments are 1 year past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

2. Summary of significant accounting policies (cont'd)

Financial instruments – initial recognition and subsequent measurement **(cont'd)**

3) Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, and derivatives liabilities.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss
Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss.

Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by KIFRS 1109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments. Gains or losses on liabilities held for trading are recognized in profit or loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in KIFRS 1109 are satisfied. The Group has not designated any financial liability as of fair value through profit or loss.

Loans and borrowings
After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR.

This category generally applies to interest-bearing loans and borrowings. For more information, refer to note on borrowings and bonds.

Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the consolidated statement of profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the consolidated statement of financial position if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

2. Summary of significant accounting policies (cont'd)

Derivative financial instruments

Initial recognition and subsequent measurement
Derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Changes of derivative's fair value are directly recognized in profit or loss.

3. Significant accounting judgments, estimates and assumptions

In the preparation of the Group's consolidated financial statements, management is required to apply accounting policies and make judgments, estimation and assumptions affecting the carrying amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. The management's significant judgments about the application of the Group's accounting policies and the main resources of the uncertainty are as follows:

(1) Fair value of financial instruments

The Group uses valuation techniques that include inputs that are not based on observable market data to estimate the fair value of certain type of financial instruments. The Group believes that the chosen valuation techniques and assumptions used are appropriate in determining the fair value of financial instruments.

(2) Provisions

As described in Note 21, the Group recognized provisions for litigation and others. These provisions are determined by estimation according to past experiences. Meanwhile, the Group provides performance awards according to management performance that is evaluated by Ministry of Strategy and Finance. As described in Note 21, these performance awards are recognized as provisions for employee benefits.

(3) Defined benefit obligation

The Group's defined benefit obligation is determined based on the actuarial valuation carried out at the end of each annual reporting period. Actuarial assumptions are the Group's best estimates of the variables in determining the cost of providing retirement benefits, such as discount rates, rates of expected future salary increases and mortality rates. Significant estimation uncertainty is likely to persist in making such assumptions due to the long-term nature of retirement benefit plan. Additional items are described in Note 20.

(4) Income taxes

The Group recognized the current taxes and deferred taxes through the best estimation of expected tax effect that is expected in future as a result of business activities during the year ended December 31, 2020. However, the final taxation may differ with the estimation; this difference may influence current tax and deferred tax assets and liabilities where the final tax effect is decided.

4. Segment information

The Group is organized into four different strategic operating segments. Each operating segment separately provides products and services, and the Group manages each operating segment individually as technological and marketing strategies applied to each operating segment are different. The Chief Operating Decision Maker reviews the internal reporting data for each strategic business at least quarterly.

Operating segments of the Group are as follows:

Operating segments	Description	Customers
Toll business	Highway	Highway user
Incidental business	Expressway rest stop, oil station lease and research service	Expressway rest stop operator, etc.
Supporting business	Consignment management service	Government, etc.
Construction business	Road construction	Government

The table below provides information for each segment for the years ended December 31, 2021 and 2020 (Korean won in millions):

	2021					
	Total revenue		Revenue from external customers		Operating profit	
Toll business	₩	4,178,844	₩	4,178,844	₩	575,766
Incidental business		871,477		871,477		42,782
Supporting business		245,916		245,916		-
Construction business		5,238,835		5,238,835		-
	₩	10,535,072	₩	10,535,072	₩	618,548

	2020					
	Total revenue		Revenue from external customers		Operating profit	
Toll business	₩	3,963,575	₩	3,963,575	₩	566,602
Incidental business		662,011		662,011		56,357
Supporting business		323,755		323,755		-
Construction business		4,608,162		4,608,162		-
	₩	9,557,503	₩	9,557,503	₩	622,959

All of the Group's revenues are generated in Korea.

The Government is a major customer of the Group's supporting business and construction business with revenue amounting to ₩5,484,751 million and ₩4,931,917 million for the years ended December 31, 2021 and 2020, respectively. No other major customer exceeds 10% of the Group's revenue.

5. Cash and cash equivalents

Cash and cash equivalents of the consolidated statements of cash flows include cash and bank deposits, net of bank overdrafts. Cash and cash equivalents as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
Cash	₩	697,174	₩	620,397
Cash equivalents		243,200		236,200
		940,374		856,597
Less: government grants for consignment management service		(382,897)		(348,317)
	₩	557,477	₩	508,280

5. Cash and cash equivalents (cont'd)

As of December 31, 2021, the amount of cash expected to be returned to the government (restricted in use) generated by the sale of idle land was ₩13,006 million.

6. Short-term financial instruments

Details of short-term financial instruments as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021	December 31, 2020
Short-term financial instruments	₩ 60,000	₩ 45,000

7. Derivatives

Details of derivative instruments as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
	Current	Non-current	Current	Non-current
Financial assets at FVTPL:				
Interest rate swap	₩ 486	₩ 3,766	₩ -	₩ 9,811
	₩ 486	₩ 3,766	₩ -	₩ 9,811
Derivatives assets:				
Currency swap	₩ 10,991	₩ 159,693	₩ 5,058	₩ 36,929
Interest rate swap	4,881	6,056	-	10,248
	₩ 15,872	₩ 165,749	₩ 5,058	₩ 47,177
Financial liabilities at FVTPL:				
Non-derivative financial liabilities (*)	₩ 103,135	₩ -	₩ -	₩ 108,238
Interest rate swap	1,990	6,446	-	5,589
	₩ 105,125	₩ 6,446	₩ -	₩ 113,827
Derivatives liabilities:				
Currency swap	₩ -	₩ 5,407	₩ 7,851	₩ 78,862
Interest rate swap	180	18,248	1,855	28,098
	₩ 180	₩ 23,655	₩ 9,706	₩ 106,960

(*) The Group has entered into an interest rate swap contract to hedge risk of fair value fluctuations of bonds due to changes in interest rates. The Group may eliminate or reduce an accounting mismatch arising from classification of bonds and derivative instruments at amortized cost and fair value, respectively, through designating bonds as financial liabilities at fair value through profit or loss.

7. Derivatives (cont'd)

Details of currency swaps as of December 31, 2021 are as follows (In millions of Korean won, EUR, USD, HKD, CHF, SEK, CAD and AUD):

			Contract amount			Contract interest rate		
	Bank	Contract period	Selling amount		Buying amount	Sell	Buy	Contract exchange rate
Cash flow hedge	Woori Bank	2012.03.02–2022.03.02	HKD	452	₩ 65,856	4.00%	3.96%	145.70
Cash flow hedge	Deutsche Bank Group	2012.05.07–2024.05.07	EUR	45	67,733	3.88%	3.98%	1,505.17
Cash flow hedge	Deutsche Bank Group	2012.05.07–2027.05.07	EUR	23	34,619	4.00%	4.06%	1,505.17
Cash flow hedge	NH Investment & Securities Co., Ltd.	2015.03.18–2027.03.18	USD	50	56,150	3.02%	2.42%	1,123.00
Cash flow hedge	Korea EXIM Bank	2015.11.30–2030.11.30	USD	50	58,000	3.21%	2.41%	1,160.00
Cash flow hedge	Nomura Securities Co.	2015.12.08–2026.06.08	USD	100	115,000	3.10%	2.33%	1,150.00
Cash flow hedge	Nomura Securities Co.	2016.04.26–2026.10.26	USD	200	232,000	2.70%	1.84%	1,160.00
Cash flow hedge	Korea EXIM Bank	2016.07.05–2031.07.05	USD	100	116,000	2.57%	1.71%	1,160.00
Cash flow hedge	Nomura Securities Co.	2017.04.28–2032.04.28	SEK	720	92,304	2.31%	2.32%	128.20
Cash flow hedge	Korea EXIM Bank.	2017.05.11–2032.05.11	CAD	135	112,725	3.03%	2.32%	835.00
Cash flow hedge	Korea Development Bank	2017.06.07–2024.06.07	CHF	100	112,200	0.25%	2.24%	1,122.00
Cash flow hedge	IBK Bank	2017.06.07–2024.06.07	CHF	50	56,100	0.25%	2.24%	1,122.00
Cash flow hedge	Korea Development Bank.	2017.06.07–2024.06.07	CHF	80	89,760	0.25%	2.24%	1,122.00
Cash flow hedge	Nomura Securities Co	2018.03.05–2023.03.05	HKD	800	110,320	3.02%	2.45%	137.90
Cash flow hedge	Korea Development Bank	2019.07.25–2022.07.25	USD	150	177,150	3m LIBOR+0.64%	1.07%	1,181.00
Cash flow hedge	Korea Development Bank	2019.11.25–2022.11.25	USD	70	81,410	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Hana Bank.	2019.11.25–2022.11.25	USD	100	116,300	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Kookmin Bank	2019.11.25–2022.11.25	USD	100	116,300	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Woori Bank	2020.06.02–2025.06.02	USD	100	123,000	3m LIBOR+1.20%	1.07%	1,230.00
Cash flow hedge	Korea Development Bank	2020.09.02–2023.09.02	AUD	125	106,813	0.93%	0.51%	854.50
Cash flow hedge	Hana Bank.	2020.09.02–2023.09.02	AUD	100	85,450	0.93%	0.51%	854.50
Cash flow hedge	Kookmin Bank	2020.09.02–2023.09.02	AUD	225	192,263	BBSW+0.72%	0.52%	854.50
Cash flow hedge	Kookmin Bank	2021.05.17~2026.05.17	USD	150	167,070	1.125%	0.995%	1,113.80
Cash flow hedge	Shinhan Bank	2021.05.17~2026.05.17	USD	100	111,380	1.125%	0.995%	1,113.80
Cash flow hedge	Hana Bank.	2021.05.17~2026.05.17	USD	150	167,070	1.125%	0.995%	1,113.80
Cash flow hedge	Korea Development Bank	2021.05.17~2026.05.17	USD	100	111,380	1.125%	0.995%	1,113.80

7. Derivatives (cont'd)

Details of currency swaps as of December 31, 2020 are as follows (In millions of Korean won, EUR, USD, HKD, CHF, CNY, SEK, CAD and AUD):

	Bank	Contract period	Contract amount: Selling amount		Contract amount: Buying amount	Contract interest rate: Sell	Contract interest rate: Buy	Contract exchange rate
Cash flow hedge	Woori Bank	2012.03.02–2022.03.02	HKD	452	₩ 65,856	4.00%	3.96%	145.70
Cash flow hedge	Deutsche Bank Group	2012.05.07–2024.05.07	EUR	45	67,733	3.88%	3.98%	1,505.17
Cash flow hedge	Deutsche Bank Group	2012.05.07–2027.05.07	EUR	23	34,619	4.00%	4.06%	1,505.17
Cash flow hedge	NH Investment & Securities Co., Ltd.	2015.03.18–2027.03.18	USD	50	56,150	3.02%	2.42%	1,123.00
Cash flow hedge	Korea EXIM Bank	2015.11.30–2030.11.30	USD	50	58,000	3.21%	2.41%	1,160.00
Cash flow hedge	Nomura Securities Co.	2015.12.08–2026.06.08	USD	100	115,000	3.10%	2.33%	1,150.00
Cash flow hedge	Nomura Securities Co.	2016.04.26–2026.10.26	USD	200	232,000	2.70%	1.84%	1,160.00
Cash flow hedge	Korea EXIM Bank	2016.07.05–2031.07.05	USD	100	116,000	2.57%	1.71%	1,160.00
Cash flow hedge	Nomura Securities Co.	2017.04.28–2032.04.28	SEK	720	92,304	2.31%	2.32%	128.20
Cash flow hedge	Korea EXIM Bank.	2017.05.11–2032.05.11	CAD	135	112,725	3.03%	2.32%	835.00
Cash flow hedge	Korea Development Bank	2017.06.07–2024.06.07	CHF	100	112,200	0.25%	2.24%	1,122.00
Cash flow hedge	IBK Bank	2017.06.07–2024.06.07	CHF	50	56,100	0.25%	2.24%	1,122.00
Cash flow hedge	Korea Development Bank.	2017.06.07–2024.06.07	CHF	80	89,760	0.25%	2.24%	1,122.00
Cash flow hedge	Nomura Securities Co	2018.03.05–2023.03.05	HKD	800	110,320	3.02%	2.45%	137.90
Cash flow hedge	Societe Generale	2018.03.28–2021.03.28	CNY	1,300	219,570	4.73%	2.12%	168.90
Cash flow hedge	Kookmin Bank	2018.10.22–2021.10.22	USD	200	226,860	3.63%	1.73%	1,134.30
Cash flow hedge	Korea EXIM Bank	2018.10.22–2021.10.22	USD	100	113,430	3.63%	1.73%	1,134.30
Cash flow hedge	Korea Development Bank	2019.07.25–2022.07.25	USD	150	177,150	3m LIBOR+0.64%	1.07%	1,181.00
Cash flow hedge	Korea Development Bank	2019.11.25–2022.11.25	USD	70	81,410	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Hana Bank.	2019.11.25–2022.11.25	USD	100	116,300	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Kookmin Bank	2019.11.25–2022.11.25	USD	100	116,300	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Woori Bank	2020.06.02–2025.06.02	USD	100	123,000	3m LIBOR+1.20%	1.07%	1,230.00
Cash flow hedge	Korea Development Bank	2020.09.02–2023.09.02	AUD	125	106,813	0.93%	0.51%	854.50
Cash flow hedge	Hana Bank.	2020.09.02–2023.09.02	AUD	100	85,450	0.93%	0.51%	854.50
Cash flow hedge	Kookmin Bank	2020.09.02–2023.09.02	AUD	225	192,263	BBSW+0.72%	0.52%	854.50

7. Derivatives (cont'd)

Details of interest rate swaps as of December 31, 2021 are as follows (Korean won in millions):

	Bank	Contract period	Notional amount	Sell	Buy
Fair value hedge	Nonghyup bank	2007.07.27–2022.07.27	100,000	5.60%	CD91+0.08%
Cash flow hedge	Deutsche Bank Group	2012.09.20–2022.09.20	100,000	One year: 4.00%, 2–10 years: 2.24% + 0.10 × (70%-Average SIFMA/Average USD 3M LIBOR) minimum 0%, maximum 6%	2.97%
Cash flow hedge	Nomura Securities Co.	2013.12.09–2023.12.09	30,000	4.35%× n/N, 30/360 n: KRW CMS10 rate<6% & USD CMS10 <6% N:365	3.81%
Cash flow hedge	Nomura Securities Co.	2014.04.04–2024.04.04	30,000	1 year-2 years: 4.25%, 30/630 3-10 years: 3%, 30/360 reference average spread for specified periods 0.00% (minimum), 5.50% (maximum) Spread Reference daily spread calculation: 20Y EUR Swap interest rate 0% (minimum), 6% (maximum)	3.56%
Cash flow hedge	Morgan Stanley	2014.09.04–2024.09.04	100,000	1) Before switch options are exercised. One year: 4.00%, 2Y-10Y: Annual Min (4.20%, 3.00x(average spread (20 EUR CMS – 2 EUR CMS))xN/M), (minimum 0.00%) 2) After switch options are exercised. Annual 3.65% (Fixed rate) - Two year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	3.08%
Cash flow hedge	Deutsche Bank Group	2015.05.15–2030.05.15	30,000	One year: 4.50 2Y-:8.0% - 0.1 x (average SIFMA/average 3M LIBOR) (Cap 5.50%, Floor 0.01%) or 5% fixed rate (Swap bank switch option)	2.69%
Cash flow hedge	Nomura Securities Co.	2015.08.19–2030.08.19	50,000	1) Before switch options are exercised One year: 3.80% 2Y-15Y: 2.11x (USD 30Y CMS -USD 2Y CMS)+0.2% (Cap 5.50%, Floor 0.00%) Or 2.8% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 2.8% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.46%
Cash flow hedge	Nomura Securities Co.	2015.09.23–2030.09.23	50,000	1) Before switch options are exercised. One year: 4.00% 4.0%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.25%) or 3.0% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 3.0% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.28%
Cash flow hedge	Nomura Securities Co.	2015.10.28–2030.10.28	50,000	One year: 3.90% 3.3%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.00%) or 2.8% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 3.0% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.18%
Cash flow hedge	NH Investment & Securities Co., Ltd.	2016.06.23–2031.06.23	30,000	One year: 2.80%, 2.3%*(EUR 30Y CMS - EUR 5Y CMS) (Cap 3.00%, Floor 0.00%)	1.60%
Cash flow hedge	Hana Bank	2016.08.09–2021.08.09	100,000	CD91+0.08%	1.34%
Cash flow hedge	Hana Bank	2016.12.08–2021.12.08	200,000	CD91+0.36%	2.07%
Cash flow hedge	Hana Bank	2017.03.22–2022.03.22	200,000	CD91+0.22%	2.00%
Cash flow hedge	Hana Bank	2018.02.26–2023.02.24	150,000	CD91+0.34%	2.68%
Cash flow hedge	Hana Bank	2018.03.21–2023.03.21	150,000	CD91+0.34%	2.65%

7. Derivatives (cont'd)

Details of interest rate swaps as of December 31, 2020 are as follows (Korean won in millions):

	Bank	Contract period	Notional amount	Sell	Buy
Cash flow hedge	Hana Bank	2018.11.08–2023.11.08	100,000	CD91+0.16%	2.20%
Cash flow hedge	Hana Bank	2020.06.25–2025.06.24	100,000	CD91+0.34%	1.24%
Cash flow hedge	Hana Bank	2021.03.24~2026.03.24	100,000	CD+0.23%	1.71%
Cash flow hedge	Hana Bank	2021.08.09~2026.08.09	100,000	CD+0.23%	1.82%
Cash flow hedge	Hana Bank	2021.11.24~2026.11.24	100,000	CD+0.23%	2.40%
Trading	JP Morgan Chase & Co.	2009.05.21–2022.07.27	50,000	CD91+0.08%	4.08%
Trading	Deutsche Bank Group	2009.05.21–2022.07.27	50,000	CD91+0.08%	4.08%
Trading	Societe Generale	2015.07.30–2022.10.30	70,000	5.82%	4.92%+7.85% ×(1-n/N) (n: days of USD CMS 10Y-2Y rate difference ≥0, N: days of interest)
Trading	Societe Generale	2015.12.17–2024.03.17	90,000	5.38%	4.48%+7.76% ×(1-n/N) (n: days of USD CMS 10Y-2Y rate difference ≥0, N: days for interest)
Trading	Nomura Securities Co.	2017.01.11–2022.04.11	100,000	5.30%	4.6%+［a%×(1-n/N)］ n:［KRW CMS 10y - USD CMS 10y ≥ -1.25%
Trading	Societe Generale	2016.12.08–2025.03.08	100,000	5.24%	4.54%+a% ×(1-n/N) n:［USDCMS30y -USDCMS2y≥ 0.00%
Trading	IBK Bank	2018.12.29–2038.11.29	50,000	2.40%	1Y~10Y: 2.134% 11Y~20Y: CD91+0.15%

7. Derivatives (cont'd)

Details of interest rate swaps as of December 31, 2020 are as follows (Korean won in millions):

	Bank	Contract period	Notional amount	Sell	Buy
Fair value hedge	Nonghyup bank	2007.07.27–2022.07.27	100,000	5.60%	CD91+0.08%
Cash flow hedge	Nomura Securities Co.	2010.11.29–2020.11.29	100,000	32X [12-month average value of absolute value (5-year CMS market price - closing price)] 0.00% (minimum), 8.50% (maximum)	4.31%
Cash flow hedge	Morgan Stanley	2010.12.10–2020.12.10	40,000	30× change 1.50% (minimum), 8.50% (maximum)	4.28%
Cash flow hedge	Societe Generale	2010.12.10–2020.12.10	40,000	30× change 1.50% (minimum), 8.50% (maximum)	4.28%
Cash flow hedge	Deutsche Bank Group	2012.09.20–2022.09.20	100,000	One year: 4.00%, 2–10 years: 2.24% + 0.10 × (70%-Average SIFMA/Average USD 3M LIBOR) minimum 0%, maximum 6%	2.97%
Cash flow hedge	Nomura Securities Co.	2013.12.09–2023.12.09	30,000	4.35%× n/N, 30/360 n: KRW CMS10 rate<6% & USD CMS10 <6% N:365	3.81%
Cash flow hedge	Nomura Securities Co.	2014.04.04–2024.04.04	30,000	1 year-2 years: 4.25%, 30/630 3-10 years: 3%, 30/360 reference average spread for specified periods 0.00% (minimum), 5.50% (maximum) Spread Reference daily spread calculation: 20Y EUR Swap interest rate 0% (minimum), 6% (maximum)	3.56%
Cash flow hedge	Morgan Stanley	2014.09.04–2024.09.04	100,000	1) Before switch options are exercised. One year: 4.00%, 2Y-10Y: Annual Min (4.20%, 3.00x(average spread (20 EUR CMS – 2 EUR CMS))xN/M), (minimum 0.00%) 2) After switch options are exercised. Annual 3.65% (Fixed rate) - Two year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	3.08%
Cash flow hedge	Deutsche Bank Group	2015.05.15–2030.05.15	30,000	One year: 4.50% 2Y-:8.0% - 0.1 x (average SIFMA/average 3M LIBOR) (Cap 5.50%, Floor 0.01%) or 5% fixed rate (Swap bank switch option)	2.69%
Cash flow hedge	Nomura Securities Co.	2015.08.19–2030.08.19	50,000	1) Before switch options are exercised One year: 3.80% 2Y-15Y: 2.11x (USD 30Y CMS -USD 2Y CMS)+0.2% (Cap 5.50%, Floor 0.00%) Or 2.8% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 2.8% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.46%
Cash flow hedge	Nomura Securities Co.	2015.09.23–2030.09.23	50,000	1) Before switch options are exercised. One year: 4.00% 4.0%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.25%) or 3.0% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 3.0% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.28%
Cash flow hedge	Nomura Securities Co.	2015.10.28–2030.10.28	50,000	One year: 3.90% 3.3%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.00%) or 2.8% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 3.0% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.18%

7. Derivatives (cont'd)

Details of interest rate swaps as of December 31, 2020 are as follows (Korean won in millions):

	Bank	Contract period	Notional amount	Sell	Buy
Cash flow hedge	NH Investment & Securities Co., Ltd.	2016.06.23–2031.06.23	30,000	One year: 2.80%, 2.3%*(EUR 30Y CMS - EUR 5Y CMS) (Cap 3.00%, Floor 0.00%)	1.60%
Cash flow hedge	Hana Bank	2016.08.09–2021.08.09	100,000	CD91+0.08%	1.34%
Cash flow hedge	Hana Bank	2016.12.08–2021.12.08	200,000	CD91+0.36%	2.07%
Cash flow hedge	Hana Bank	2017.03.22–2022.03.22	200,000	CD91+0.22%	2.00%
Cash flow hedge	Hana Bank	2018.02.26–2023.02.24	150,000	CD91+0.34%	2.68%
Cash flow hedge	Hana Bank	2018.03.21–2023.03.21	150,000	CD91+0.34%	2.65%
Cash flow hedge	Hana Bank	2018.11.08–2023.11.08	100,000	CD91+0.16%	2.20%
Cash flow hedge	Hana Bank	2020.06.25–2025.06.24	100,000	CD91+0.34%	1.24%
Trading	JP Morgan Chase & Co.	2009.05.21–2022.07.27	50,000	CD91+0.08%	4.08%
Trading	Deutsche Bank Group	2009.05.21–2022.07.27	50,000	CD91+0.08%	4.08%
Trading	Societe Generale	2015.07.30–2022.10.30	70,000	5.82%	4.92%+7.85% ×(1-n/N) (n: days of USD CMS 10Y-2Y rate difference ≥0, N: days of interest)
Trading	Societe Generale	2015.12.17–2024.03.17	90,000	5.38%	4.48%+7.76% ×(1-n/N) (n: days of USD CMS 10Y-2Y rate difference ≥0, N: days for interest)
Trading	Nomura Securities Co.	2017.01.11–2022.04.11	100,000	5.30%	4.6%+［a%×(1-n/N)］ n:［KRW CMS 10y - USD CMS 10y ≥ -1.25%
Trading	Societe Generale	2016.12.08–2025.03.08	100,000	5.24%	4.54%+a% ×(1-n/N) n: ［USDCMS30y -USDCMS2y≥ 0.00%
Trading	IBK Bank	2018.12.29–2038.11.29	50,000	2.40%	1Y~10Y: 2.134% 11Y~20Y: CD91+0.15%

7. Derivatives (cont'd)

Derivatives transaction gain (loss) for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	Gain (loss) on valuation		Gain (loss) on transaction		Other comprehensive income	
	2021	2020	2021	2020	2021	2020
Hedge accounting applied:						
Currency swap	₩ 183,964	₩ (102,621)	₩ 16,412	₩ (3,520)	₩ 23,245	₩ 45,100
Interest rate swap	(5,103)	(3,088)	-	-	17,317	18,107
	₩ 178,861	₩ (105,709)	₩ 16,412	₩ (3,520)	₩ 40,562	₩ 63,207

Derivatives transaction gain (loss) for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	Gain (loss) on valuation		Gain (loss) on transaction		Accumulated comprehensive income (loss)	
	2021	2020	2021	2020	2021	2020
Financial instruments at FVTPL:						
Interest rate swap	₩ (8,406)	₩ 11,624	₩ (472)	₩ 12	₩ -	₩ -
Bonds	5,103	3,088	-	-	-	-
	₩ (3,303)	₩ 14,712	₩ (472)	₩ 12	₩ -	₩ -

8. Trade and other receivables

Trade and other receivables as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021			
	Receivables	Allowance for doubtful accounts	Present value of discount	Carrying amount
Current:				
Other receivables	₩ 358,690	₩ (8,853)	₩ (180)	₩ 349,657
Non-current:				
Other receivables	113,209	-	(302)	112,907
	₩ 471,899	₩ (8,853)	₩ (482)	₩ 462,564

	December 31, 2020			
	Receivables	Allowance for doubtful accounts	Present value of discount	Carrying amount
Current:				
Other receivables	₩ 306,473	₩ (8,901)	₩ (187)	₩ 297,385
Non-current:				
Other receivables	109,916	-	(682)	109,234
	₩ 416,389	₩ (8,901)	₩ (869)	₩ 406,619

8. Trade and other receivables (cont'd)

Details of other receivables as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021			
	Receivables	Allowance for doubtful accounts	Present value discount	Carrying amount
Current:				
Other accounts receivable	₩ 343,186	₩ (8,853)	₩ -	₩ 334,333
Accrued income	928	-	-	928
Short-term deposits	14,576	-	(180)	14,396
	358,690	(8,853)	(180)	349,657
Non-current:				
Long-term deposits	113,209	-	(302)	112,907
	₩ 471,899	₩ (8,853)	₩ (482)	₩ 462,564

	December 31, 2020			
	Receivables	Allowance for doubtful accounts	Present value discount	Carrying amount
Current:				
Other accounts receivable	₩ 290,766	₩ (8,901)	₩ -	₩ 281,865
Accrued revenue	819	-	-	819
Short-term deposits	14,888	-	(187)	14,701
	306,473	(8,901)	(187)	297,385
Non-current:				
Long-term deposits	109,916	-	(682)	109,234
	₩ 416,389	₩ (8,901)	₩ (869)	₩ 406,619

Credit risk and allowance for doubtful accounts

The above trade and other receivables consist of other accounts receivable, accrued income and deposits which are measured at amortized cost.

The credit period for other accounts receivable is one month; so, the Group does not recognize an allowance for doubtful accounts for other accounts receivable that are not past due or past due but not impaired because of the collateral. The Group's allowance for doubtful accounts is computed based on the average collection rates and history of bad debts for the past five years. The Group recognizes 99% of allowance for doubtful accounts where the aging is more than 30 months past due as these other accounts receivable are not likely to be recovered based on past experiences.

8. Trade and other receivables (cont'd)

Ageing analysis of other accounts receivable as of December 31, 2021 and 2020 is as follows (Korean won in millions):

	2021	2020
Neither past due nor impaired	₩ 134,309	₩ 110,778
Past due nor impaired:		
- 1 month–7 months	12,071	14,014
- 7–13 months	28,716	25,012
- 13–19 months	6,724	11,337
- 19–25 months	24,984	21,345
- 25–31 months	8,184	14
- 31–37 months	5,943	11,171
- More than 37 months	14,419	2,936
Impaired (individually assessed)	-	-
Impaired (collectively assessed):		
- 1–7 months	31,912	30,827
- 7–13 months	19,292	18,230
- 13–19 months	988	796
- 19–25 months	15,154	9,892
- 25–31 months	167	271
- 31–37 months	9,435	12,750
- More than 37 months	30,888	21,393
Deduction: allowance for doubtful accounts	(8,853)	(8,901)
	₩ 334,333	₩ 281,865

The above aging analysis relates to the current other accounts receivable.

The Group considers changes in credit ratings of the receivables from the beginning of the credit period to the end of the reporting period in determining the recoverability of the receivables. The concentration of credit risk is limited because the number of the customers are very large and the correlation among them is low.

Changes in allowance for doubtful accounts for trade and other receivables for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Beginning balance	₩ 8,901	₩ 7,928
Bad debt expenses, net	2,109	3,284
Write-off	(2,157)	(2,311)
Ending balance	₩ 8,853	₩ 8,901

9. Financial assets at fair value

Financial assets at fair value as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021	December 31, 2020
Non-current financial instruments:		
Financial assets at fair value through profit or loss (*)	₩ 60,202	₩ 42,258
Financial assets at fair value through other comprehensive income	22,181	21,601

(*) ₩3,766 million (₩9,811 million in 2020) of interest rate swap, which is a derivative component, is excluded.

9. Financial assets at fair value (cont'd)

Financial assets at fair value through profit or loss as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	Shares	Percentage of ownership	2021 Acquisition cost	2021 Carrying amount	2020 Acquisition cost	2020 Carrying amount
Seoul-Chuncheon Highway Co., Ltd	1,976,000	10.00%	₩ 9,880	15,753	₩ 9,880	14,701
The 2nd Seoul-Incheon Linking Highway Co., Ltd	1,602,230	4.76%	8,011	3,294	8,011	3,355
Seoul North Highway Corporation	4,876,000	10.00%	24,380	5,007	24,380	4,525
Beneficiary certificates	-	-	20,154	36,148	20,154	19,677
			₩ 62,425	60,202	₩ 62,425	42,258

Financial assets at fair value through other comprehensive income as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	Shares	Percentage of ownership	2021 Acquisition cost	2021 Carrying amount	2020 Acquisition cost	2020 Carrying amount
DREAMLINE Corporation	181,549	1.10%	₩ 44,028	937	₩ 44,028	946
Korea Overseas Infrastructure & Urban Development Corporation	4,154,400	5.28%	20,772	21,137	20,772	20,591
BAKAD International B.V.	-	0.10%	107	107	64	64
			₩ 64,907	22,181	₩ 64,864	21,601

Changes in financial assets at fair value as of December 31, 2021 and 2020 are as follows (Korean won in millions):

2021	Beginning balance	Acquisition (reclassification)	Disposals	Valuation	Ending balance
Financial assets at fair value through profit or loss	₩ 42,258	₩ 15,753	₩ (146)	₩ 2,337	₩ 60,202
Financial instruments at fair value through other comprehensive income	21,601	₩ 43	-	537	22,181

2020	Beginning balance	Acquisition (reclassification)	Disposals	Valuation	Ending balance
Financial assets at fair value through profit or loss	₩ 45,419	₩ 10,215	₩ (58)	₩ (13,317)	₩ 42,258
Financial instruments at fair value through other comprehensive income	21,803	₩ 60	-	(262)	21,601

10. Loans

Details of loans as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		
	Nominal value	Present value of discount	Carrying amount
Loans for tuition (*1)	₩ 3,027	₩ (204)	₩ 2,823
Loans for housing (*2)	40,486	(5,722)	34,764
Loans for rental housing	447	-	447
	₩ 43,960	₩ (5,926)	₩ 38,034

	December 31, 2020		
	Nominal value	Present value of discount	Carrying amount
Loans for tuition (*1)	₩ 3,672	₩ (279)	₩ 3,393
Loans for housing (*2)	35,240	(6,331)	28,909
Loans for rental housing	405	-	405
	₩ 39,317	₩ (6,610)	₩ 32,707

(*1) The Group provides loans to its employees, who have worked for more than a year, for the purpose of paying tuition of their children at zero interest rate. Repayment is made in four years (a total of 16 installments), with a two-year grace period after graduation.

(*2) The Group provides loans at market interest rates to employees without houses in order to stabilize their housing. The loan's repayment period is less than twenty years, with a grace period of less than five years.

11. Inventories

Details of inventories as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
	Acquisition cost	Carrying amounts	Acquisition cost	Carrying amounts
Merchandise	₩ 1,418	₩ 1,418	₩ 1,811	₩ 1,811
Supplies	24,103	24,103	18,246	18,246
Others	1,045	1,045	1,035	1,035
	₩ 26,566	₩ 26,566	₩ 21,092	₩ 21,092

12. Non-financial assets

Details of non-financial assets as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
	Current	Non-current	Current	Non-current
Prepaid expenses	₩ 13,481	₩ 8,292	₩ 5,538	₩ 5,996
Greenhouse gas emission rights	316	-	285	-
Other non-financial assets	-	1,676	-	1,676
	₩ 13,797	₩ 9,968	₩ 5,823	₩ 7,672

13. Investments in associates and joint ventures

Investments in associates and joint ventures as of December 31, 2021 and 2020 are as follows (Korean won in millions, except percentage of ownership):

Company	Major business activity	Location of incorporation	December 31, 2021 Percentage of ownership	Acquisition cost	Carrying amount
Associates:					
Korea Construction Management Corp. (**)	Building, civil engineering service	Korea	42.50%	₩ 5,648	₩ -
Expressway Solar Power Co., Ltd.	Expressway solar power projects	Korea	29.00%	1,856	3,084
Highway solar Co., Ltd	New renewable energy service	Korea	29.00%	653	926
				8,157	4,010
Joint venture:					
Busan-Ulsan Expressway Co., Ltd. (*)	Road and facility operating service	Korea	51.00%	839	-
				839	-
				₩ 8,996	₩ 4,010

(*) The Group classified the investee as a joint venture as all financial and operating policies of the investee require joint approval by the Group and the other investors.
(**) For the year ended December 31, 2021, paid-in capital reduction was conducted to maintain proper capital in response to downsize of business and organization scale and improve financial solvency of the Group by recovering from the investment early. As a result, 169,861 shares among 400,000 shares owned by the Group were reduced by ₩10,000 per share, and ₩1,700 million was received for consideration. The Group recognized a difference of consideration received for capital reduction and a carrying amount as gain on disposal of investments in associates

Company	Major business activity	Location of incorporation	December 31, 2020 Percentage of ownership	Acquisition cost	Carrying amount
Associates:					
Korea Construction Management Corp.	Building, civil engineering service	Korea	42.50%	₩ 9,822	₩ -
Expressway Solar Power Co., Ltd.	Expressway solar power projects	Korea	29.00%	1,856	3,019
Highway solar Co., Ltd	New renewable energy service	Korea	29.00%	653	855
				12,331	3,874
Joint venture:					
Busan-Ulsan Expressway Co., Ltd. (*)	Road and facility operating service	Korea	51.00%	839	-
				839	-
				₩ 13,170	₩ 3,874

(*) The Group classified the investee as a joint venture as all financial and operating policies of the investee require joint approval by the Group and the other investors.

13. Investments in associates and joint ventures(cont'd)

Changes in investments in associates and joint ventures for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021					
	Beginning balance	Acquisition (disposal)	Share of profit	Change in equity	Dividend	Ending balance
Associates:						
Korea Construction Management Corp. (*1)	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
Expressway Solar Power Co., Ltd.	3,019	-	135	(70)	-	3,084
Highway solar Co., Ltd	855	-	71	-	-	926
	3,874	-	206	(70)	-	4,010
Joint venture:						
Busan-Ulsan Expressway Co., Ltd. (*2)	-	-	-	-	-	-
	₩ 3,874	₩ -	₩ 206	₩ (70)	₩ -	₩ 4,010

(*1) Korea Construction Management Corp.'s, an associate, investments balance became nil due to the cumulative loss; thus, the application of equity method was suspended. As of December 31, 2021, the change in equity amount of ₩1,224 million (share of loss of ₩1,224 million) was not recognized.

(*2) The balance of investments in Busan-Ulsan Expressway Co., Ltd. amounts to nil due to the cumulative losses, and the equity method was suspended. As a result, the share of loss not recognized is ₩169,389 million as of December 31, 2021. In addition, the Group's shares were provided as collateral in connection with the borrowings of the investee.

	2020					
	Beginning balance	Acquisition (disposal)	Share of profit (loss)	Change in equity	Dividend	Ending balance
Associates:						
Korea Construction Management Corp. (*1)	₩ 2,719	₩ -	₩ (2,778)	₩ 59	₩ -	₩ -
Expressway Solar Power Co., Ltd.	2,825	-	264	(70)	-	3,019
Highway solar Co., Ltd	891	-	(36)	-	-	855
	6,435	-	(2,550)	(11)	-	3,874
Joint venture:						
Busan-Ulsan Expressway Co., Ltd. (*2)	-	-	-	-	-	-
	₩ 6,435	₩ -	₩ (2,550)	₩ (11)	₩ -	₩ 3,874

(*1) Korea Construction Management Corp.'s, an associate, investments balance became nil due to the cumulative loss; thus, the application of equity method was suspended. As of December 31, 2020, the change in equity amount of ₩139 million (share of loss of ₩139 million) was not recognized.

(*2) The balance of investments in Busan-Ulsan Expressway Co., Ltd. amounts to nil due to the cumulative losses, and the equity method was suspended. As a result, the share of loss not recognized is ₩163,853 million as of December 31, 2020. In addition, the Group's shares were provided as collateral in connection with the borrowings of the investee.

13. Investments in associates and joint ventures (cont'd)

Financial information of associates and joint ventures is as follows (Korean won in millions):

	December 31, 2021			
	Assets	Liabilities	Revenue	Profit (loss) for the year
Associates:				
Korea Construction Management Corp.	₩ 28,533	₩ 9,706	₩ 23,264	₩ (4,292)
Expressway Solar Power Co., Ltd.	13,747	3,113	2,637	466
Highway solar Co., Ltd	15,500	12,306	2,331	287
Joint venture:				
Busan-Ulsan Expressway Co. Ltd.	583,216	915,350	72,897	(10,282)

	December 31, 2020			
	Assets	Liabilities	Revenue	Profit (loss) for the year
Associates:				
Korea Construction Management Corp.	₩ 35,384	₩ 14,551	₩ 39,077	₩ (6,884)
Expressway Solar Power Co., Ltd.	15,262	4,852	2,855	569
Highway solar Co., Ltd	16,345	13,397	2,128	(13)
Joint venture:				
Busan-Ulsan Expressway Co. Ltd.	608,283	929,563	72,353	(9,940)

14. Property and equipment

Property and equipment as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021			
	Acquisition cost	Government grant	Accumulated depreciation	Carrying amount
Land	₩ 130,958	₩ -	₩ -	₩ 130,958
Buildings	947,740	(235)	(359,386)	588,119
Structures	105,769	(158)	(58,942)	46,669
Machinery	115,246	-	(86,438)	28,808
Information technology equipment	607,510	-	(458,671)	148,839
Vehicles	146,105	(255)	(102,123)	43,727
Furniture and fixtures	135,297	(4)	(97,275)	38,018
Tools and equipment	36,618	-	(27,641)	8,977
Right-of-use assets (vehicles)	11,676	-	(8,261)	3,415
Right-of-use assets (buildings)	4,004	-	(2,788)	1,216
Construction-in-progress	93,936	-	-	93,936
	₩ 2,334,859	₩ (652)	₩ (1,201,525)	₩ 1,132,682

14. Property and equipment(cont'd)

	December 31, 2020							
		Acquisition cost		Government grant		Accumulated depreciation		Carrying amount
Land	₩	133,762	₩	-	₩	-	₩	133,762
Buildings		937,374		(245)		(328,292)		608,837
Structures		102,921		(175)		(55,992)		46,754
Machinery		110,126		-		(82,930)		27,196
Information technology equipment		582,769		-		(461,036)		121,733
Vehicles		141,313		(346)		(95,364)		45,603
Furniture and fixtures		120,695		(5)		(84,199)		36,491
Tools and equipment		35,184		-		(23,754)		11,430
Right-of-use assets (vehicles)		9,897		-		(5,299)		4,598
Right-of-use assets (buildings)		3,264		-		(1,804)		1,460
Construction-in-progress		72,179		-		-		72,179
	₩	2,249,484	₩	(771)	₩	(1,138,670)	₩	1,110,043

Changes in property and equipment for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

			2021									
		Beginning balance		Acquisition (*1)		Disposals		Depreciation		Others (*2)		Ending balance
Land	₩	133,762	₩	-	₩	-	₩	-	₩	(2,805)	₩	130,957
Buildings		609,082		1,931		(895)		(32,274)		10,510		588,354
(Government grant)		(245)		-		-		10		-		(235)
Structures		46,929		359		(114)		(3,086)		2,739		46,827
(Government grant)		(175)		-		-		17		-		(158)
Machinery		27,196		-		(90)		(7,930)		9,633		28,809
Information technology equipment		121,733		105		(101)		(42,071)		69,173		148,839
Vehicles		45,949		-		(27)		(16,108)		14,168		43,982
(Government grant)		(346)		-		-		91		-		(255)
Furniture and fixtures		36,496		1,213		(6)		(15,112)		15,430		38,021
(Government grant)		(5)		-		-		1		-		(4)
Tools and equipment		11,430		-		-		(3,888)		1,435		8,977
Right-of-use assets		6,058		2,897		(12)		(4,144)		(168)		4,631
Construction-in-progress		72,179		143,700		-		-		(121,943)		93,936
	₩	1,110,043	₩	150,205	₩	(1,245)	₩	(124,494)	₩	(1,828)	₩	1,132,681

(*1) Increase due to asset contributions of ₩2,036 million is included.

(*2) Other changes are due to reclassification of construction-in-progress to depreciable assets and transfers to investment properties.

14. Property and equipment (cont'd)

		2020				
	Beginning balance	Acquisition (*1)	Disposals	Depreciation	Others (*2)	Ending balance
Land	₩ 141,262	₩ -	₩ (4)	₩ -	₩ (7,496)	₩ 133,762
Buildings	570,733	3	(2,051)	(30,168)	70,565	609,082
(Government grant)	(255)	-	-	10	-	(245)
Structures	43,901	20	(338)	(2,936)	6,282	46,929
(Government grant)	(191)	-	-	16	-	(175)
Machinery	29,016	-	(126)	(8,493)	6,799	27,196
(Government grant)	-	-	-	-	-	-
Information technology equipment	111,344	94	(16)	(37,155)	47,466	121,733
Vehicles	44,489	-	(47)	(16,139)	17,646	45,949
(Government grant)	(266)	(160)	-	80	-	(346)
Furniture and fixtures	33,343	535	(10)	(15,002)	17,630	36,496
(Government grant)	(6)	-	-	1	-	(5)
Tools and equipment	14,384	-	-	(4,142)	1,188	11,430
Right-of-use assets	3,427	555	(133)	(4,219)	6,428	6,058
Construction-in-progress	84,179	155,809	-	-	(167,809)	72,179
	₩ 1,075,360	₩ 156,856	₩ (2,725)	₩ (118,147)	₩ (1,301)	₩ 1,110,043

(*1) Increase due to asset contributions of ₩97 million is included.

(*2) Other changes are due to recognition of right-of-use assets, reclassification of construction-in-progress to depreciable assets and transfers to investment properties and intangible assets.

15. Investment properties

Investment properties as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		
	Acquisition Cost	Accumulated depreciation	Carrying amount
Land	₩ 306,571	₩ -	₩ 306,571
Buildings	1,163,193	(500,959)	662,234
Structures	622,054	(360,023)	262,030
Construction-in-progress	464,415	-	464,415
	₩ 2,556,233	₩ (860,982)	₩ 1,695,250

	December 31, 2020		
	Acquisition cost	Accumulated depreciation	Carrying amount
Land	₩ 262,239	₩ -	₩ 262,239
Buildings	1,139,656	(462,610)	677,046
Structures	615,147	(340,670)	274,477
Construction-in-progress	348,843	-	348,843
	₩ 2,365,885	₩ (803,280)	₩ 1,562,605

15. Investment properties (cont'd)

Changes in investment properties for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021					
	Beginning balance	Acquisition (*1)	Disposals	Depreciation	Other (*2)	Ending balance
Land	₩ 262,239	₩ -	₩ -	₩ -	₩ 44,332	₩ 306,571
Buildings	677,046	818	(2,560)	(40,073)	27,003	662,234
Structures	274,477	50	(1,179)	(22,525)	11,208	262,031
Construction-in-progress	348,843	194,625	-	-	(79,053)	464,415
	₩ 1,562,605	₩ 195,493	₩ (3,739)	₩ (62,598)	₩ 3,490	₩ 1,695,251

(*1) Increase due to asset contributions of ₩868 million is included.
(*2) Other changes are due to reclassification of construction-in-progress and others.

	2020					
	Beginning balance	Acquisition (*1)	Disposals	Depreciation	Other (*2)	Ending balance
Land	₩ 250,206	₩ -	₩ -	₩ -	₩ 12,033	₩ 262,239
Buildings	665,437	12,710	(4,132)	(38,903)	41,934	677,046
Structures	253,852	931	(1,110)	(20,680)	41,484	274,477
Construction-in-progress	224,780	207,493	-	-	(83,430)	348,843
	₩ 1,394,274	₩ 221,134	₩ (5,242)	₩ (59,583)	₩ 12,022	₩ 1,562,605

(*1) Increase due to asset contributions of ₩13,641 million is included.
(*2) Other changes are due to reclassification of construction-in-progress and others.

The amounts recognized in profit or loss from investment properties for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Rental income from investment properties	₩ 162,208	₩ 175,116
Operation expenses arising directly from investment properties	(114,421)	(105,650)
	₩ 47,787	₩ 69,466

There are no significant differences between the carrying amount and fair value of investment properties.

All the investment properties are directly-owned by the Group.

16. Intangible assets

(1) Intangible assets as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021			
	Acquisition cost	Accumulated amortization	Accumulated impairment	Carrying amount
Software	₩ 201,174	₩ (164,891)	₩ -	₩ 36,283
Industrial property rights	1,490	(587)	-	903
Development cost	386	(386)	-	-
Intangible assets under development	15,126,197	-	(262,588)	14,863,609
Expressway operating rights (*1)	87,018,818	(33,218,323)	-	53,800,495
Others	12,318	-	-	12,318
	₩ 102,360,383	₩ (33,384,187)	₩ (262,588)	₩ 68,713,608

16. Intangible assets (cont'd)

(*1) The Group mainly engages in the construction and management of roads. The Group considers the entire road as one cash-generating unit and determines that there is no indication of impairment on the right to operate toll roads.

	December 31, 2020			
	Acquisition cost	Accumulated amortization	Accumulated impairment	Carrying amount
Software	₩ 179,515	₩ (152,309)	₩ -	₩ 27,206
Industrial property rights	1,360	(519)	-	841
Development cost	386	(386)	-	-
Intangible assets under development	10,526,432	-	(262,588)	10,263,844
Expressway operating rights (*1)	86,245,388	(31,518,170)	-	54,727,218
Others	10,214	-	-	10,214
	₩ 96,963,295	₩ (31,671,384)	₩ (262,588)	₩ 65,029,323

(*1) The Group mainly engages in the construction and management of roads. The Group considers the entire road as one cash-generating unit and determines that there is no indication of impairment on the right to operate toll roads.

Changes in intangible assets for years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021					
	Beginning balance	Acquisition (*1)	Disposals	Amortization	Other (*2)	Ending balance
Software	₩ 27,206	₩ 424	₩ -	₩ (12,992)	₩ 21,645	₩ 36,283
Industrial property rights	841	-	-	(68)	130	903
Intangible assets under development	10,263,844	5,413,263	-	-	(813,498)	14,863,609
Expressway operating rights	54,727,218	-	(15,575)	(1,700,153)	789,005	53,800,495
Others	10,214	114	-	-	1,990	12,318
	₩ 65,029,323	₩ 5,413,801	₩ (15,575)	₩ (1,713,213)	₩ (728)	₩ 68,713,608

(*1) Acquisition of intangible assets under development includes ₩159,118 million of capitalized interest.
(*2) Other changes are due to reclassification of intangible assets under development.

	2020					
	Beginning balance	Acquisition (*1)	Disposals	Amortization	Other (*2)	Ending balance
Software	₩ 30,574	₩ 120	₩ -	₩ (11,796)	₩ 8,308	₩ 27,206
Industrial property rights	815	-	-	(66)	92	841
Intangible assets under development	8,505,799	4,774,761	-	-	(3,016,716)	10,263,844
Expressway operating rights	53,297,695	-	(1,726)	(1,576,425)	3,007,674	54,727,218
Others	9,087	-	-	-	1,127	10,214
	₩ 61,843,970	₩ 4,774,881	₩ (1,726)	₩ (1,588,287)	₩ 485	₩ 65,029,323

(*1) Acquisition of intangible assets under development includes ₩155,835 million of capitalized interest and asset contributions of ₩28 million.
(*2) Other changes are due to reclassification of intangible assets under development.

16. Intangible assets (cont'd)

Major individual intangible assets as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	Detail	December 31, 2021	December 31, 2020
Expressway operating rights	Right to highway management	₩ 53,800,495	₩ 54,727,218

(*) The Group amortizes service and operating rights using the investment cost recovery method.

17. Trade and other payables

Trade and other payables as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
	Current	Non-current	Current	Non-current
Other accounts payable	₩ 724,364	₩ -	₩ 537,128	₩ -
Accrued expenses	210,259	203	209,413	202
Leasehold deposits received	27,461	203,472	28,467	201,402
Other deposits received	3,213	-	2,217	-
Lease liabilities	2,930	1,772	3,624	2,510
	₩ 968,227	₩ 205,447	₩ 780,849	₩ 204,114

18. Borrowings and bonds

Borrowings and bonds as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021	December 31, 2020
Current:		
Current portion of long-term borrowings	₩ 200,000	₩ 300,000
Current portion of bonds	3,036,628	2,853,448
Less: discount on bonds	(268)	(688)
Financial liabilities at fair value through profit or loss (*)	103,135	-
	3,339,495	3,152,760
Non-current:		
Long-term borrowings	900,000	700,000
Bonds	26,741,853	24,957,616
Less: discount on bonds	(10,116)	(6,032)
Financial liabilities at fair value through profit or loss (*)	-	108,238
	27,631,737	25,759,822
	₩ 30,971,232	₩ 28,912,582

(*) The Group has entered into an interest rate swap contract to hedge risk of fair value fluctuations due to changes in interest rates. The Group may eliminate or reduce an accounting mismatch arising from classification of bonds and derivative instruments at amortized cost and fair value, respectively, through designating bonds as financial liability at fair value through profit or loss.

18. Borrowings and bonds (cont'd)

Long-term borrowings as of December 31, 2021 and 2020 are as follows (Korean won in millions):

Type	Lenders	Interest rates	December 31, 2021 Carrying amount	December 31, 2020 Carrying amount
Loan operating funds	KEB Hana Bank	CD+0.08%	₩ -	₩ 100,000
Loan operating funds	KEB Hana Bank	CD+0.36%	-	200,000
Loan operating funds	KEB Hana Bank	CD+0.22%	200,000	200,000
Loan operating funds	KEB Hana Bank	CD+0.34%	150,000	150,000
Loan operating funds	KEB Hana Bank	CD+0.34%	150,000	150,000
Loan operating funds	KEB Hana Bank	CD+0.16%	100,000	100,000
Loan operating funds	KEB Hana Bank	CD+0.23%	100,000	-
Loan operating funds	KEB Hana Bank	CD+0.23%	100,000	-
Loan operating funds	KEB Hana Bank	CD+0.24%	200,000	-
Loan operating funds	KEB Hana Bank	CD+0.34%	100,000	100,000
			1,100,000	1,000,000
Less: current portion			(200,000)	(300,000)
			₩ 900,000	₩ 700,000

Details of bonds as of December 31, 2021 and 2020 are as follows (Korean won, USD, HKD, EUR, CHF, CNY, SEK, CAD and AUD in millions):

Series	Annual interest rate (%)	Maturity	December 31, 2021 Foreign currency	December 31, 2021 Local currency	December 31, 2020 Foreign currency	December 31, 2020 Local currency
408th	5.35	2027.02.14		₩ 180,000		₩ 180,000
410th	5.29	2027.02.27		80,000		80,000
411st	5.39	2037.02.27		50,000		50,000
416th	5.30	2022.04.11		100,000		100,000
419th	5.60	2022.07.27		103,135		108,238
425th	5.82	2022.10.30		70,000		70,000
464th	5.38	2024.03.17		90,000		90,000
466th	5.35	2029.04.02		150,000		150,000
468th	5.24	2039.04.21		60,000		60,000
486th	5.21	2025.03.08		100,000		100,000
496th	5.25	2025.07.13		140,000		140,000
497th	5.12	2030.07.20		90,000		90,000
498th	4.98	2025.07.27		100,000		100,000
500th	4.57	2040.08.26		120,000		120,000
503rd	4.58	2025.09.29		130,000		130,000
505th	4.91	2025.10.25		130,000		130,000
515th	4.64	2030.12.17		100,000		100,000
518th	4.65	2021.03.14		-		150,000
520th	4.62	2021.04.18		-		150,000
522nd	4.39	2026.05.20		120,000		120,000
523rd	4.39	2021.05.27		-		80,000
524th	4.40	2021.06.14		-		150,000
525th	4.52	2021.06.21		-		130,000
526th	4.32	2026.06.28		130,000		130,000
528th	4.08	2021.07.26		-		190,000
529th	4.27	2021.08.16		-		70,000
530th	3.92	2031.08.23		200,000		200,000
531st	4.31	2021.09.16		-		120,000
532nd	4.40	2031.09.23		180,000		180,000
534th	4.15	2026.10.25		100,000		100,000
535th	4.08	2021.11.08		-		200,000
538th	4.01	2021.11.30		-		170,000
540th	4.04	2021.12.15		-		100,000
541st	4.13	2022.01.18		100,000		100,000

			December 31, 2021		December 31, 2020	
Series	Annual interest rate (%)	Maturity	Foreign currency	Local currency	Foreign currency	Local currency
542nd	4.25	2027.01.31		150,000		150,000
543rd	4.14	2027.03.21		250,000		250,000
544th	4.00	2022.03.27		100,000		100,000
546th	3.99	2022.04.12		150,000		150,000
549th	3.83	2027.05.11		100,000		100,000
550th	4.05	2022.05.22		100,000		100,000
551st	3.90	2032.05.25		150,000		150,000
553rd	4.02	2027.06.15		70,000		70,000
554th	3.25	2032.06.27		150,000		150,000
555th	3.10	2022.07.24		150,000		150,000
556th	5.35	2027.08.30		100,000		100,000
558th	2.24%+0.10x(70%-Avg SIFMA/Avg USD 3m LIBOR)	2022.09.20		100,000		100,000
559th	3.14	2022.09.25		200,000		200,000
560th	3.48	2062.09.26		100,000		100,000
562nd	3.21	2022.12.11		150,000		150,000
563rd	3.37	2027.12.18		190,000		190,000
564th	3.22	2028.01.22		150,000		150,000
565th	3.13	2023.01.28		150,000		150,000
567th	3.28	2033.02.13		150,000		150,000
568th	3.17	2028.02.27		100,000		100,000
569th	3.03	2023.03.21		150,000		150,000
570th	3.16	2033.03.27		150,000		150,000
573rd	3.25	2023.06.05		100,000		100,000
574th	3.42	2025.06.13		100,000		100,000
578th	3.76	2023.09.05		100,000		100,000
579th	3.56	2023.09.26		50,000		50,000
580th	3.62	2023.10.02		60,000		60,000
582nd	3.73	2028.10.10		100,000		100,000
588th	4.35%X n/N n: Korea CMS 10-year interest rate <(or =) 6% and US CMS 10-year interest rate <(or =) 6% N: Total calendar days (365)	2023.12.09		30,000		30,000
592nd	3.68	2024.02.13		100,000		100,000
596th	3.64	2024.03.13		100,000		100,000
597th	3.43	2021.03.20		-		100,000
599th	3.65	2024.03.27		60,000		60,000
600th	3.65	2024.04.02		50,000		50,000
601st	3 X Spread Reference Average spread over a specific period Spread Reference Daily spread between calculators: 20Y EUR Swap interest rate-2Y EUR Swap interest rate	2024.04.04		30,000		30,000
603rd	3.66	2024.04.16		120,000		120,000
605th	3.24	2029.07.16		50,000		50,000
606th	Annual Min (4.20%, 3.00 × (avg spread (20 EUR CMS-2 EUR CMS)) × N / M), (Lower limit 0.00%)	2024.09.04		100,000		100,000
607th	2.95	2029.10.02		100,000		100,000
608th	3.00	2029.10.15		100,000		100,000
609th	2.96	2034.10.30		170,000		170,000
610th	2.69	2024.11.06		250,000		250,000
611st	2.86	2026.11.13		100,000		100,000
612nd	2.69	2022.11.20		100,000		100,000
614th	2.78	2024.12.24		50,000		50,000
615th	2.46	2025.02.13		190,000		190,000
616th	2.55	2030.02.27		200,000		200,000
617th	2.45	2025.03.06		100,000		100,000
619th	2.33	2030.04.16		100,000		100,000
620th	2.36	2025.04.24		90,000		90,000
622nd	2.80	2030.05.14		170,000		170,000
623rd	8.55% - 0.1 × [Average SIFMA / average 3month LIBOR] (Cap 5.50%, Floor 0.01% per year)	2030.05.15		30,000		30,000
625th	2.56	2025.05.28		70,000		70,000
626th	2.64	2025.06.19		130,000		130,000
627th	2.57	2025.07.22		150,000		150,000
631st	2.11*(USD 30Y CMS -USD 2Y CMS)+0.2% (Cap 5.50%, Floor 0.00% annual payment) 2) After the switch option	2030.08.19		50,000		50,000

Series	Annual interest rate (%)	Maturity	December 31, 2021 Foreign currency	December 31, 2021 Local currency	December 31, 2020 Foreign currency	December 31, 2020 Local currency
	exercise: 2.8% per year(fixed interest rate)					
632nd	2.37	2025.08.19		₩ 80,000		₩ 80,000
633rd	2.55	2035.09.15		130,000		130,000
634th	4.0%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.25% per year) /Actual/365 2) 2) After the switch option exercise: 3.0 % per year (fixed interest rate)	2030.09.23		50,000		50,000
635th	2.24	2025.09.24		50,000		50,000
636th	3.3%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.00% per year) 2) After the switch option exercise: 2.8% per year(fixed interest rate)	2030.10.28		50,000		50,000
637th	2.40	2025.11.12		150,000		150,000
639th	2.49	2030.11.30		200,000		200,000
641st	2.35	2030.12.16		120,000		120,000
642nd	1.98	2036.02.18		190,000		190,000
643rd	1.74	2021.03.04		-		100,000
644th	2.01	2046.05.25		150,000		150,000
645th	2.3%*(EUR 30Y CMS - EUR 5Y CMS) (Cap 3.00%, Floor 0.00% per year)	2031.06.23		30,000		30,000
646th	1.54	2036.07.20		150,000		150,000
648th	1.57	2046.08.26		100,000		100,000
650th	1.52	2021.10.17		-		110,000
651st	1.85	2046.10.24		130,000		130,000
652nd	1.90	2046.11.10		140,000		140,000
653rd	2.06	2021.11.24		-		200,000
654th	2.12	2021.12.08		-		160,000
655th	2.30	2047.02.17		150,000		150,000
656th	2.02	2022.02.27		140,000		140,000
657th	2.35	2047.03.17		110,000		110,000
658th	2.16	2024.03.29		50,000		50,000
659th	2.24	2027.03.29		20,000		20,000
660th	2.03	2022.04.18		100,000		100,000
661st	2.38	2037.04.19		110,000		110,000
662nd	2.31	2047.06.21		120,000		120,000
663rd	2.42	2037.08.24		140,000		140,000
664th	2.33	2027.08.31		70,000		70,000
665th	2.09	2022.09.07		60,000		60,000
666th	2.37	2032.09.08		160,000		160,000
667th	2.32	2027.09.15		160,000		160,000
668th	2.35	2047.09.21		150,000		150,000
669th	2.40	2037.09.27		100,000		100,000
670th	2.47	2037.10.12		150,000		150,000
671st	2.64	2037.11.03		150,000		150,000
672nd	2.63	2027.11.10		90,000		90,000
673rd	2.57	2022.11.16		110,000		110,000
675th	2.66	2047.11.24		170,000		170,000
676th	2.54	2047.12.08		100,000		100,000
677th	2.889	2048.02.21		150,000		150,000
678th	2.855	2038.03.09		130,000		130,000
679th	2.73	2023.03.14		170,000		170,000
680th	2.869	2048.05.10		100,000		100,000
681st	2.882	2033.05.18		110,000		110,000
682nd	2.669	2023.05.31		90,000		90,000
683rd	2.664	2048.06.28		90,000		90,000
684th	2.543	2023.06.28		110,000		110,000
685th	2.607	2038.07.19		120,000		120,000
686th	2.299	2023.08.24		110,000		110,000
687th	2.301	2048.09.14		70,000		70,000
688th	2.361	2023.10.11		130,000		130,000
689th	2.349	2038.10.25		70,000		70,000
690th	2.202	2023.10.31		90,000		90,000
691st	2.183	2023.11.14		150,000		150,000
692nd	2.195	2048.11.22		90,000		90,000
694th	2.400	2038.11.29		50,000		50,000
695th	2.000	2048.12.07		110,000		110,000
696th	2.029	2023.12.13		110,000		110,000

			December 31, 2021		December 31, 2020	
Series	Annual interest rate (%)	Maturity	Foreign currency	Local currency	Foreign currency	Local currency
697th	1.954	2024.02.20		150,000		150,000
698th	2.147	2049.02.22		130,000		130,000
699th	2.151	2039.02.27		100,000		100,000
700th	2.143	2049.03.08		150,000		150,000
701st	2.129	2049.03.19		120,000		120,000
702nd	1.823	2022.04.04		150,000		150,000
703rd	1.963	2049.04.11		170,000		170,000
704th	1.976	2049.04.25		100,000		100,000
705th	1.890	2029.05.23		90,000		90,000
706th	1.787	2049.05.30		130,000		130,000
707th	1.672	2024.06.05		170,000		170,000
708th	1.589	2024.06.14		110,000		110,000
709th	1.512	2024.06.21		160,000		160,000
710th	1.593	2029.07.05		80,000		80,000
711st	1.531	2024.07.17		140,000		140,000
712nd	1.318	2049.08.22		120,000		120,000
713rd	1.416	2024.09.05		130,000		130,000
714th	1.467	2049.09.25		130,000		130,000
715th	1.454	2022.10.16		100,000		100,000
716th	1.522	2022.10.23		130,000		130,000
717th	1.802	2024.11.06		110,000		110,000
718th	1.833	2026.11.14		100,000		100,000
719th	1.665	2024.11.21		90,000		90,000
720th	1.715	2024.11.27		90,000		90,000
721st	1.556	2022.12.05		180,000		180,000
722nd	1.627	2024.12.12		190,000		190,000
723rd	1.666	2026.12.18		100,000		100,000
724th	1.298	2025.03.05		200,000		200,000
725th	1.518	2050.03.12		150,000		150,000
726th	1.567	2027.03.19		110,000		110,000
727th	1.658	2025.03.26		170,000		170,000
728th	1.749	2030.04.02		100,000		100,000
729th	1.780	2040.04.02		110,000		110,000
730th	1.469	2025.04.09		150,000		150,000
731st	1.705	2050.04.09		120,000		120,000
732nd	1.122	2023.04.17		190,000		190,000
733rd	1.598	2030.04.17		70,000		70,000
734th	1.271	2023.04.24		170,000		170,000
735th	1.727	2040.04.24		100,000		100,000
736th	1.101	2023.05.14		160,000		160,000
737th	1.578	2040.05.21		140,000		140,000
738th	1.504	2030.05.28		130,000		130,000
739th	1.628	2040.06.18		160,000		160,000
740th	1.437	2027.07.16		70,000		70,000
741st	0.741	2021.07.23		-		130,000
742nd	0.985	2023.07.23		130,000		130,000
743rd	1.431	2027.09.24		110,000		110,000
744th	0.979	2022.10.14		180,000		180,000
745th	1.648	2030.10.22		150,000		150,000
746th	1.706	2050.10.29		130,000		130,000
747th	1.678	2030.11.05		100,000		100,000
748th	1.731	2040.11.05		100,000		100,000
749th	1.467	2025.11.12		110,000		110,000
750th	1.809	2050.11.12		80,000		80,000
751st	1.101	2023.11.19		100,000		100,000
752nd	1.577	2027.11.19		80,000		80,000
753rd	1.453	2025.11.26		190,000		190,000
754th	1.789	2030.12.03		170,000		170,000
755th	1.121	2023.12.11		150,000		150,000
756th	1.859	2050.12.23		150,000		150,000
757th	2.182	2051.03.11		150,000		-
758th	1.826	2026.03.18		120,000		-
759th	2.239	2031.03.18		160,000		-
760th	2.084	2031.03.26		100,000		-
761st	2.150	2041.03.26		50,000		-
762nd	1.283	2024.04.02		150,000		-
763rd	1.735	2026.04.08		160,000		-

Series	Annual interest rate (%)	Maturity	December 31, 2021 Foreign currency	December 31, 2021 Local currency	December 31, 2020 Foreign currency	December 31, 2020 Local currency
764th	2.281	2051.04.08		140,000		-
765th	2.146	2041.04.15		140,000		-
766th	2.197	2051.06.17		130,000		-
767th	1.823	2026.07.09		130,000		-
768th	2.137	2051.07.09		230,000		-
769th	2.024	2031.07.23		50,000		-
770th	2.066	2041.07.23		110,000		-
771st	2.036	2051.08.13		130,000		-
772nd	1.543	2024.08.20		160,000		-
773rd	2.096	2051.09.09		220,000		-
774th	1.993	2024.10.14		90,000		-
775th	2.391	2051.10.14		140,000		-
776th	2.326	2026.10.21		150,000		-
777th	2.408	2041.10.21		80,000		-
778th	1.999	2024.10.21		50,000		-
779th	2.549	2026.10.28		80,000		-
780th	2.592	2051.10.28		130,000		-
781st	2.427	2026.11.05		130,000		-
782nd	2.523	2041.11.05		70,000		-
783rd	2.417	2041.11.11		60,000		-
784th	2.403	2051.11.11		160,000		-
785th	2.430	2051.11.19		120,000		-
786th	2.074	2024.12.03		150,000		-
787th	2.303	2051.12.03		90,000		-
788th	2.050	2024.12.09		50,000		-
789th	2.304	2041.12.09		100,000		-
790th	2.312	2041.12.16		70,000		-
791st	2.350	2051.12.16		30,000		-
7th foreign bond	4.000	2022.03.02	HKD 452	68,718	HKD 452	63,438
9th foreign bond	3.875	2024.05.07	EUR 45	60,405	EUR 45	60,221
10th foreign bond	4.000	2027.05.07	EUR 23	30,874	EUR 23	30,780
18th foreign bond	3.020	2027.03.18	USD 50	59,275	USD 50	54,400
19th foreign bond	3.205	2030.11.30	USD 50	59,275	USD 50	54,400
20th foreign bond	3.100	2026.06.08	USD 100	118,550	USD 100	108,800
21st foreign bond	2.700	2026.10.26	USD 200	237,100	USD 200	217,600
22ndforeign bond	2.565	2031.07.05	USD 100	118,550	USD 100	108,800
27th foreign bond	2.310	2032.04.28	SEK 720	94,349	SEK 720	95,594
28th foreign bond	3.030	2032.05.11	CAD 135	125,632	CAD 135	115,196
29th foreign bond	0.250	2024.06.07	CHF 230	298,418	CHF 230	283,896
30th foreign bond	3.020	2023.03.05	HKD 800	121,624	HKD 800	112,280
31st foreign bond	4.730	2021.03.28	-	-	CNY 1,300	215,462
32nd foreign bond	3.625	2021.10.22	-	-	USD 300	326,400
33rd foreign bond	3M USD LIBOR +0.64%	2022.07.25	USD 150	177,825	USD 150	163,200
34th foreign bond	3M USD LIBOR +0.60%	2022.11.25	USD 70	82,985	USD 70	76,160
35th foreign bond	3M USD LIBOR +0.60%	2022.11.25	USD 200	237,100	USD 200	217,600
36th foreign bond	3M USD LIBOR +1.20%	2025.06.02	USD 100	118,550	USD 100	108,800
37th foreign bond	0.928	2023.09.02	AUD 225	193,250	AUD 225	188,226
38th foreign bond	BBSW+0.72%	2023.09.02	AUD 225	193,250	AUD 225	188,226
39th foreign bond	1.13	2026.05.17	USD 500	592,750	-	-
				29,881,616		27,919,302
Less: discount on bonds				(10,384)		(6,720)
				29,871,232		27,912,582
Less: current portion of bonds				(3,036,628)		(2,853,448)
Less: current portion of discount on bonds				268		688
Less: financial liabilities at fair value through profit or loss				(103,135)		(108,238)
				₩ 26,731,737		₩ 24,951,584

The repayment schedule of borrowings and bonds as of December 31, 2021 and 2020 is as follows (Korean won in millions):

	December 31, 2021 Borrowings	December 31, 2021 Bonds	December 31, 2021 Total
Within 1 year	₩ 200,000	₩ 3,139,763	₩ 3,339,763
1 year–5 years	900,000	11,373,898	12,273,898
More than 5 years	-	15,367,955	15,367,955
	₩ 1,100,000	₩ 29,881,616	₩ 30,981,616

18. Borrowings and bonds (cont'd)

	December 31, 2020					
	Borrowings		Bonds		Total	
Within 1 year	₩	300,000	₩	2,853,448	₩	3,153,448
1 year–5 years		700,000		11,410,285		12,110,285
More than 5 years		-		13,655,569		13,655,569
	₩	1,000,000	₩	27,919,302	₩	28,919,302

19. Leases

The Group has lease contracts for buildings and vehicles used for its operations. Leases of buildings and vehicles generally have lease terms between 2 and 4 years.

The Group also has certain leases of machinery, furniture and fixtures with lease terms of 12 months or less and leases with low-value assets of office supplies less than ₩5 million. The Group applies the short-term leases and leases of low-value assets recognition exemptions for these leases.

Details of right-of-use assets as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021					
	Acquisition cost		Accumulated depreciation		Carrying amount	
Buildings	₩	4,004	₩	(2,788)	₩	1,216
Vehicles		11,676		(8,261)		3,415
	₩	15,680	₩	(11,049)	₩	4,631

	December 31, 2020					
	Acquisition cost		Accumulated depreciation		Carrying amount	
Buildings	₩	3,264	₩	(1,804)	₩	1,460
Vehicles		9,897		(5,299)		4,598
	₩	13,161	₩	(7,103)	₩	6,058

Changes in right-of-use assets for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	Building		Vehicles		Total	
As of January 1, 2021	₩	1,460	₩	4,598	₩	6,058
Acquisition		1,082		1,815		2,897
Depreciation		(1,158)		(2,986)		(4,144)
Disposals		-		(12)		(12)
Others		(168)		-		(168)
As of December 31, 2021	₩	1,216	₩	3,415	₩	4,631

	Building		Vehicles		Total	
As of January 1, 2020	₩	1,464	₩	1,962	₩	3,426
Acquisition		1,827		5,657		7,484
Depreciation		(1,336)		(2,883)		(4,219)
Disposals		(495)		(138)		(633)
As of December 31, 2020	₩	1,460	₩	4,598	₩	6,058

19. Leases (cont'd)

Details of maturity analysis of lease liabilities as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Not later than one year	₩ 2,937	₩ 3,682
Later than one year and not later than five years	1,862	2,611
Later than five years	-	-
Total undiscounted lease payments	4,799	6,293
Less: present value adjustment, etc.	(97)	(159)
Present value of lease payments	₩ 4,702	₩ 6,134

Current and non-current classification of lease liabilities as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Current	₩ 2,930	₩ 3,624
Non-current	1,772	2,510
	₩ 4,702	₩ 6,134

The amount recognized in profit or loss during the years ended December 31, 2021 and 2020 from the position of the lessee is as follows (Korean won in millions):

	2021	2020
Depreciation expense of right-of-use assets (buildings)	₩ 1,158	₩ 1,336
Depreciation expense of right-of-use assets (vehicles)	2,986	2,883
Expense relating to short-term leases	14,521	14,148
Expense relating to leases of low-value assets	1,672	1,831
Interest expense on lease liabilities	165	196
Total amount recognized in profit or loss	₩ 20,502	₩ 20,394

Changes in lease liabilities for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	Current	Non-current
As of January 1, 2021	₩ 3,624	₩ 2,510
Increase	1,154	1,744
Decrease	(3,800)	(363)
Interest expenses on lease liabilities	73	92
Others	1,879	(2,211)
As of December 31, 2021	₩ 2,930	₩ 1,772

	Current	Non-current
As of January 1, 2020	₩ 1,411	₩ 1,787
Increase	4,038	4,151
Decrease	(1,917)	(3,532)
Interest expenses on lease liabilities	92	104
As of December 31, 2020	₩ 3,624	₩ 2,510

The Group, as a lessee, recognized total lease-related cash outflows of ₩4,163 million in 2021 and ₩4,096 million in 2020 in the consolidated statements of cash flows.

20. Retirement benefits plan

Defined contribution plan

The Group operates a defined contribution plan, which requires contributions to be made to separately administered funds. If employees retire prior to meeting the conditions of the defined contribution plan, the Group's contribution reduces by the amount of contribution forfeited.

Contribution amounting to ₩ 11,406 million (2020: ₩24,279 million) recognized in the consolidated statements of profit or loss and other comprehensive income represents the amount to be contributed by the Group, which is calculated based on the rates stated under the pension plan. The Group made all contributions to be paid for the year ended December 31, 2021. On the other hand, profit or loss from the defined contribution pension plan during the years ended December 31, 2021 and 2020 was recognized as the following in the consolidated financial statements (Korean won in millions):

	2021	2020
Cost of sales	₩ 7,513	₩ 14,380
Direct cost of business	1,516	2,786
Selling and administrative expenses (retirement benefits)	1,951	6,294
Selling and administrative expenses (others)	426	819
Total	₩ 11,406	₩ 24,279

Defined benefit plan

The Group operates a defined benefit plan for employees. A recent valuation on actuarial assumptions for plan assets and defined benefit obligation was performed by Dlog, an actuary consulting firm, on January 21, 2022. The present value of defined benefit obligation and related service costs are determined using the projected unit credit method.

The component of net defined benefit liabilities as of December 31, 2021 and 2020 is as follows (Korean won in millions):

	December 31, 2021	December 31, 2020
Present value of defined benefit obligation	₩ 366,738	₩ 311,909
Fair value of plan assets	(340,019)	(269,955)
Net defined benefit liabilities	₩ 26,719	₩ 41,954

Meanwhile, employee benefits liabilities in the consolidated statement of financial position as of December 31, 2021 includes other long-term employee benefit liabilities of ₩82,327 million (December 31, 2020: ₩81,188 million) in addition to net defined benefit liabilities.

Changes in present value of defined benefit obligation for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Defined benefit obligation at beginning of year	₩ 311,909	₩ 240,916
Current service cost	63,392	50,662
Interest expenses on the DBO (*)	6,232	4,795
Transfer effect of newcomer	1,429	8,733
Remeasurements of defined benefit plan	(1,970)	11,841
Benefits paid	(14,254)	(5,038)
Defined benefit obligation at end of year	₩ 366,738	₩ 311,909

(*) The rate used to discount DBO was determined by reference to market yields at the end of the reporting period on high quality corporate bonds (AAA).

20. Retirement benefits plan (cont'd)

Change in fair value of plan assets for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Fair value of plan assets at beginning of year	₩	269,955	₩	175,670
Interest income on plan assets (*)		5,074		3,174
Remeasurements of defined benefit plan		309		392
Benefits paid		(12,613)		(3,227)
Contributions		77,294		93,946
Fair value of plan assets at end of year	₩	340,019	₩	269,955

(*) Interest income on plan assets was determined by reference to market yields at the end of the reporting period on high quality corporate bonds (AAA).

Expenses recognized in profit or loss for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Current service costs	₩	63,392	₩	50,662
Interest expenses on liabilities		6,232		4,795
Transfer effect of newcomer		1,429		8,733
Interest income on plan assets		(5,074)		(3,174)
Total	₩	65,979	₩	61,016

The above profit or loss was recognized in the consolidated financial statements as follows:

		2021		2020
Cost of sales	₩	50,708	₩	46,607
Direct cost of business		3,955		3,422
Selling and administrative expenses (retirement benefit)		10,015		9,652
Selling and administrative expenses (others)		1,301		1,335
Total	₩	65,979	₩	61,016

Re-measurements recognized in other comprehensive income for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Actuarial gain/loss	₩	1,970	₩	(11,841)
Return on plan assets		309		392
Total	₩	2,279	₩	(11,449)

The Group expects to make a contribution of ₩77,294 million in the next year in related to the defined benefit plan.

21. Provisions

Provisions as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
	Current	Non-current	Current	Non-current
Provisions for litigation	₩ 109	₩ 619,280	₩ -	₩ 592,735
Provisions for employee benefits	126,162	-	127,945	-
Provisions for GHG emission	664	-	850	-
	₩ 126,935	₩ 619,280	₩ 128,795	₩ 592,735

Changes in provisions for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021				
	Beginning balance	Additional provisions made	Amount used	Reversal	Ending balance
Provisions for litigation	₩ 592,735	₩ 91,675	₩ -	₩ (65,021)	₩ 619,389
Provisions for employee benefits	127,945	126,162	(127,945)	-	126,162
Provisions for GHG emission	850	664	(698)	(152)	664
	₩ 721,530	₩ 218,501	₩ (128,643)	₩ (65,173)	₩ 746,215

	2020				
	Beginning balance	Additional provisions made	Amount used	Reversal	Ending balance
Provisions for litigation	₩ 325,763	₩ 287,166	₩ -	₩ (20,194)	₩ 592,735
Provisions for employee benefits	114,438	127,945	(114,438)	-	127,945
Provisions for GHG emission	2,573	177	(1,357)	(543)	850
	₩ 442,774	₩ 415,288	₩ (115,795)	₩ (20,737)	₩ 721,530

22. Government grants

Accounting for government grants

The Group presents government grants in the form of deductions from the related assets in accordance with the Article 44 of the Government Accounting Standards.

Government grants presented as a deduction to each related assets as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021	December 31, 2020
Buildings	₩ 235	₩ 245
Structures	158	175
Vehicles	255	346
Furniture and fixtures	4	5
	₩ 652	₩ 771

22. Government grants (cont'd)

Changes in government grants presented as a deduction to each related assets for the years ended December 31 2021 and 2020 are as follows (Korean won in millions):

	2021			
	Beginning balance	Increase	Decrease	Ending balance
Buildings	₩ 245	₩ -	₩ (10)	₩ 235
Structures	175	-	(16)	159
Vehicles	346	-	(91)	255
Furniture and fixtures	5	-	(1)	4
	₩ 771	₩ -	₩ (118)	₩ 652

	2020			
	Beginning balance	Increase	Decrease	Ending balance
Buildings	₩ 255	₩ -	₩ (10)	₩ 245
Structures	191	-	(16)	175
Vehicles	266	160	(80)	346
Furniture and fixtures	6	-	(1)	5
	₩ 718	₩ 160	₩ (107)	₩ 771

Income relates to government grants recognized during the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Offset of depreciation	₩ 118	₩ 108

23. Non-financial liabilities

Non-financial liabilities as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
	Current	Non-current	Current	Non-current
Advances received	₩ 187,494	₩ -	₩ 235,910	₩ -
Unearned revenue	1,141	30,231	1,176	34,413
Withholdings	28,373	-	22,171	-
Other non-financial liabilities	77	-	77	-
	₩ 217,085	₩ 30,231	₩ 259,334	₩ 34,413

24. Consignment management service

In accordance with Article 12 of *Korea Expressway Corporation Act,* the Group constructs, maintains and repairs expressways and other works related to expressways on behalf of the Government and local governments.

In accordance with Article 44-3 of the Government Accounting Standards, the Group recognizes the fund received from the Government but unused at the year-end for the consignment management service as a deduction to cash and cash equivalents.

24. Consignment management service (cont'd)

Unused funds or funds to be returned related to the consignment management service as of December 31, 2021 and 2020 are as follows (Korean won in millions):

Accounts	Type	Counter parts	December 31, 2021	December 31, 2020
Consignment management service fund	Unexecuted deposit fund	Government	₩ 131,476	₩ 80,031
Consignment management service fund	Unexecuted deposit fund	Public institutions	251,421	268,286
			₩ 382,897	₩ 348,317

Changes in unused funds or funds to be returned related to the consignment management service for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021				
Accounts	Counter- party	Beginning balance	Increase	Decrease	Others	Ending balance
Consignment management service fund	Government	₩ 80,031	₩ 116,462	₩ (65,017)	₩ -	₩ 131,476
Consignment management service fund	Public institutions	268,286	193,349	(210,214)	-	251,421
		₩ 348,317	₩ 309,811	₩ (275,231)	₩ -	₩ 382,897

(*) Revenue and expenses of the consignment management service are amounts that reflect the effect of applying special accounting for transportation facilities, transfer between accounts and others, and may differ from those in the details on execution of funds.

		2020				
Accounts	Counter-party	Beginning balance	Increase	Decrease	Others	Ending balance
Consignment management service fund	Government	₩ 70,321	₩ 55,624	₩ (45,913)	₩ -	₩ 80,031
Consignment management service fund	Public institutions	242,418	283,257	(257,389)	-	268,286
		₩ 312,739	₩ 338,881	₩ (303,302)	₩ -	₩ 348,317

(*) Revenue and expenses of the consignment management service are amounts that reflect the effect of applying special accounting for transportation facilities, transfer between accounts and others, and may differ from those in the details on execution of funds.

Revenue and expenses recognized related to the consignment management service in the consolidated financial statements for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021		2020	
	Revenue	Expense	Revenue	Expense
Construction	₩ 239,386	₩ 239,386	₩ 316,080	₩ 316,080
Purchase of lots for expressways	842	842	1,091	1,091
Operation of Incheon Bridge	4,052	4,052	4,523	4,523
Safety inspection service for non-management authority	1,636	1,636	2,061	2,061
	₩ 245,916	₩ 245,916	₩ 323,755	₩ 323,755

25. Share capital

The number of authorized shares of the Company is 4,000,000,000 shares, and the number of shares issued as of December 31, 2021 and 2020 is 3,865,608,773 shares and 3,659,957,373 shares, respectively. The par value is ₩10,000, and share capital as of December 31, 2021 and 2020 is as follows (Korean won in billions):

	December 31, 2021				December 31, 2020			
	Government		Non-government		Government		Non-government	
Common share	₩	33,928	₩	4,728	₩	32,230	₩	4,369

Changes in the number of shares issued for the years ended December 31, 2021 and 2020 are as follows (In shares):

	2021	2020
Beginning number of shares	3,659,957,373	3,493,725,473
Capital increase by issuing new shares	205,651,400	166,231,900
Ending number of shares	3,865,608,773	3,659,957,373

26. Retained earnings and dividends

Details of retained earnings as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
Legal reserve (*)	₩	464,911	₩	458,803
Other reserve		990,574		990,544
Unappropriated retained earnings		22,686		6,488
	₩	1,478,171	₩	1,455,835

(*) The *Korea Expressway Corporation Act* requires the Group to appropriate, as a legal reserve, at least 20% of net income for each period, until the reserve equals 50% of share capital. The legal reserve may not be utilized for cash dividends but may be used to offset a future deficit, if any, or may be transferred to share capital.

Details of other reserves as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
Reserve for business expansion	₩	990,574	₩	990,544

Changes in retained earnings for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021		2020	
Beginning balance	₩	1,455,835	₩	1,485,204
Profit for the year attributable to owners of the parent		33,635		27,462
Dividends paid		(13,579)		(38,431)
Remeasurements of defined benefit plans		2,279		(11,450)
Amortization of share discount		-		(6,950)
Ending balance	₩	1,478,171	₩	1,455,835

26. Retained earnings and dividends (cont'd)

Dividends paid for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions, except dividends per share):

		2021		2020
Dividends paid (₩4 and ₩11 per share in 2021 and 2020, respectively)	₩	13,579	₩	38,431

Changes in remeasurements of defined benefit plans for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Beginning balance	₩	(100,240)	₩	(88,790)
Changes		2,279		(11,450)
Ending balance	₩	(97,961)	₩	(100,240)

27. Other components of equity

Details of other components of equity as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		December 31, 2021		December 31, 2020
Accumulated other comprehensive income (loss):				
Loss on valuation of financial assets at fair value through other comprehensive income		(41,913)		(42,450)
Gain on hedging instruments in cash flow hedges		40,522		13,579
Share of other comprehensive income of associates and joint ventures		3,093		3,163
		1,702		(25,708)
Others		(3)		(3)
	₩	1,699	₩	(25,710)

Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Beginning balance	₩	(25,708)	₩	(87,729)
Gain (loss) on valuation of financial assets at fair value through other comprehensive income		537		(262)
Gain on hedging instruments in cash flow hedges		26,943		62,295
Share of other comprehensive loss of associates and joint ventures		(70)		(11)
Non-controlling interests		-		-
Ending balance	₩	1,702	₩	(25,708)

28. Revenue

Details of revenue from continuing operations, which excludes other income, other gains and finance income, for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Revenue from product sales:		
Sales of oil	₩ 286,633	₩ 230,909
	286,633	230,909
Revenue from services:		
Operation of toll expressways	4,174,098	3,958,912
Operation of other expressways	4,746	4,663
Rental income from service areas	98,676	109,664
Rental income from gas stations	65,819	68,624
Others incidental business	12,131	13,866
Management of privately funded expressways	62,175	44,257
Indemnity for loss on land	-	673
Operation of information centers	284,227	144,291
Others	61,816	49,726
	4,763,688	4,394,676
Construction contract revenue:		
Construction business	5,238,835	4,608,162
	5,238,835	4,608,162
Revenue from consignment management service:		
Income from privately funded land purchase map supporting business	842	1,091
Other map supporting business	5,688	6,584
Consignment construction business	239,386	316,080
	245,916	323,755
	₩ 10,535,072	₩ 9,557,503

29. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Contribution to the employee welfare fund	₩ -	₩ 10,490
Salaries	118,634	113,450
Retirement benefits	11,966	15,946
Termination benefits	3,045	2,405
Employee welfares	20,016	12,614
Insurance	104	83
Depreciation	28,338	26,741
Amortization	12,621	11,398
Bad debt expenses	2,226	2,638
Service fees	5,601	4,834
Advertising	4,513	3,460
Training	5,548	4,945
Vehicles maintenance	584	614
Publication	670	596
Business promotion	120	143
Rents	2,894	2,907
Communications	637	642
Taxes and dues	38,427	35,152

	2021	2020
Supplies	1,722	1,569
Utilities	2,491	2,460
Repairs	2,367	2,418
Development expenses	6,867	6,294
Travel	2,867	2,412
Clothing fee	445	232
Survey and analysis	1,602	2,896
Other	56,974	54,797
	₩ 331,279	₩ 322,136

Details of other selling and administrative expenses for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Research salaries	₩ 22,770	₩ 22,896
Research expenses	30,986	28,946
Others	3,218	2,955
	₩ 56,974	₩ 54,797

30. Other income and expenses

Details of other income for the years ended December 31, 2021 and 2020, are as follows (Korean won in millions):

	2021	2020
Reversal of other provisions	₩ 65,022	₩ 20,194
Reversal of other allowance for doubtful accounts	349	-
Gain on contribution of assets	3,222	13,766
Gain on exemption of debts	166	181
Compensation and reparation income	6,355	13,871
Rental income	43,565	38,652
Others (*1)	25,027	40,225
	₩ 143,706	₩ 126,889

(*1) Details of "others" in other income for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Reverse of short-term employee benefits (paid annual leave)	₩ 6,453	₩ 1,779
Cause deductible income	6,005	5,885
Value-added tax refund	118	4
Other income	12,451	32,557
	₩ 25,027	₩ 40,225

Details of other expenses for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Increase in other provisions	₩ 91,675	₩ 287,166
Other bad debt expenses	232	646
Compensation and reparation expenses	3,981	4,532
Donations	3,823	27,220
Others (*2)	18,563	22,779
	₩ 118,274	₩ 342,343

30. Other income and expenses (cont'd)

(*2) Details of "others" in other expenses for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Short-term employee benefits (paid annual leave)	₩	6,033	₩	11,321
Attributable fee		6,319		6,231
Parking lot communication facility use charges		24		31
Other expenses		6,187		5,196
	₩	18,563	₩	22,779

31. Other loss, net

Details of net other loss for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Gain on disposal of property and equipment	₩	1,454	₩	2,606
Gain on disposal of intangible assets		11,688		5,592
Gain on insurance settlements		12		47
Gain on disposal of investment properties		56		1
Gain on foreign currency translations		476		1,021
Gain on foreign currency transactions		33		9
Other gain (*1)		1,935		1,482
Loss on disposal of property and equipment		(478)		(2,060)
Loss on disposal of investment properties		(3,834)		(5,196)
Loss on foreign currency translations		(46)		(262)
Loss on foreign currency transactions		(14)		(119)
Other loss (*2)		(18,048)		(17,840)
	₩	(6,766)	₩	(14,719)

(*1) Details of other gain for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Gain on disposal of wastes	₩	1,935	₩	1,482

(*2) Details of other loss for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Loss on disasters	₩	18,048	₩	17,840

32. Finance income

Details of finance income for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

		2021		2020
Interest income	₩	9,183	₩	9,858
Dividend income		231		161
Gain on disposal of financial assets		2,840		2,840
Gain on valuation of financial assets at fair value through profit or loss		14,236		14,712
Gain on valuation of derivative instruments		185,210		19,703

	2021	2020
Gain on transaction of derivative instruments	16,412	-
Gain on foreign currency translations	1,905	122,335
Gain on foreign currency transactions	-	3,520
Other finance income	-	7
	₩ 230,017	₩ 173,136

Details of interest income included in finance income for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Cash and cash equivalents	₩ 6,867	₩ 7,637
Loans and receivables	1,190	1,033
Trade and other receivables	1,126	1,188
	₩ 9,183	₩ 9,858

33. Finance costs

Details of finance costs for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Interest expenses	₩ 602,491	₩ 626,140
Loss on disposal of financial assets	3,312	2,828
Loss on valuation of financial assets at fair value through profit or loss	15,201	13,317
Loss on valuation of derivative instruments	1,245	122,323
Loss on transaction of derivative instruments	-	3,520
Loss on hedged item related to fair value hedge	5,103	3,088
Loss on foreign currency translations	185,211	19,996
Loss on foreign currency transactions	16,412	-
	₩ 828,975	₩ 791,213

Details of interest expenses included in finance costs for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Trade and other payables	₩ 6,437	₩ 8,318
Financial liabilities at fair value through profit or loss	1,494	1,267
Short-term borrowings	1,002	264
Long-term borrowings	22,652	20,371
Bonds	729,312	751,671
Lease interest	75	84
	760,972	781,975
Less: capitalization of borrowing costs	(158,481)	(155,835)
	₩ 602,491	₩ 626,140

The weighted-average capitalization rates for borrowings for the years ended December 31, 2021 and 2020 are 2.65% and 2.77%, respectively.

34. Income tax expense (benefit)

The components of income tax expense (benefit) for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Current income taxes	₩ 6,527	₩ 15,954
Adjustments of taxes of prior periods	-	(271,258)
Income tax expense (benefit)	₩ 6,527	₩ (255,304)

The reconciliation between profit (loss) before income tax and income tax expense (benefit) for the years ended December 31, 2021 and 2020 is as follows (Korean won in millions):

	2021	2020
Profit (loss) before income tax	₩ 40,162	₩ (227,842)
Applicable tax rates	24.2%	24.2%
Income tax at the Group's statutory tax rates	9,719	(55,138)
Adjustment:		
Effect of step-up tax rates	(462)	(462)
Adjustments of taxes of prior periods	-	(271,258)
Non-taxable income	(1)	(9,457)
Non-deductible expenses	460	24,471
Tax credit	(1,279)	-
Effect of changes in temporary differences unrecognized for deferred taxes	(1,910)	56,540
	(3,192)	(200,166)
Income tax expense (benefit)	₩ 6,527	₩ (255,304)
Effective tax rate	16.25%	-

As of December 31, 2021 and 2020, the Group has not recognized deferred tax assets on net deductible temporary differences and unused tax losses as it is not probable that taxable profit will be available against which the temporary differences and unused tax losses can be utilized.

35. Expenses by nature

Details of expenses by nature for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	Change in inventories		Selling and administrative expenses		Cost of sales		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Changes in inventories	₩ (5,474)	₩ 494	₩ -	₩ -	₩ -	₩ -	₩ (5,474)	₩ 494
Inventories purchased	586,373	446,040	-	-	-	-	586,373	446,040
Contribution to the employee welfare fund	-	-	-	10,490	-	-	-	10,490
Salaries	-	-	118,634	113,450	652,699	646,879	771,333	760,329
Retirement benefits	-	-	11,966	15,946	55,857	57,158	67,823	73,104
Termination benefits	-	-	3,045	2,405	2,587	2,389	5,632	4,793
Employee welfare	-	-	20,016	12,614	98,856	86,666	118,872	99,280
Insurance	-	-	104	83	2,165	997	2,269	1,081
Depreciation	-	-	28,338	26,741	158,757	150,989	187,095	177,730
Amortization	-	-	12,621	11,398	1,700,592	1,576,890	1,713,213	1,588,287
Bad debt expenses	-	-	2,226	2,638	-	-	2,226	2,638
Service fees	-	-	5,601	4,834	97,712	88,951	103,313	93,785
Advertisement	-	-	4,513	3,460	10,216	9,019	14,729	12,479
Training	-	-	5,548	4,945	4,295	2,513	9,843	7,458
Vehicles	-	-	584	614	23,463	21,691	24,047	22,305

	Change in inventories		Selling and administrative expenses		Cost of sales		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
maintenance								
Publication	-	-	670	595	2,164	1,965	2,834	2,560
Business promotion	-	-	120	143	159	165	279	308
Rents	-	-	2,894	2,907	3,319	3,575	6,213	6,483
Communication	-	-	637	642	2,953	2,666	3,590	3,308
Taxes and dues	-	-	38,427	35,152	55,627	47,554	94,054	82,705
Supplies	-	-	1,722	1,569	6,705	5,573	8,427	7,142
Utilities	-	-	2,491	2,460	80,869	75,398	83,360	77,858
Repairs	-	-	2,367	2,418	443,238	416,207	445,605	418,625
Development expenses	-	-	6,867	6,293	2,986	2,506	9,853	8,799
Travel	-	-	2,867	2,412	2,043	1,976	4,910	4,388
Clothes	-	-	445	232	3,904	3,605	4,349	3,837
Survey and analysis	-	-	1,602	2,896	1,771	1,167	3,373	4,064
Sales promotion expenses	-	-	-	-	604	620	604	620
Other selling and administrative expenses	-	-	56,974	54,797	-	-	56,974	54,797
Other cost of sales	-	-	-	-	5,590,805	4,958,757	5,590,805	4,958,757
	₩ 580,899	₩ 446,534	₩ 331,279	₩ 322,136	₩ 9,004,346	₩ 8,165,874	₩ 9,916,524	₩ 8,934,543

36. Earnings per share

There are no dilutive securities, and the Group's basic earnings per share for the years ended December 31, 2021 and 2020 are as follows (Korean won):

	2021	2020
Profit for the year attributable to owners of the parent	₩ 33,635,134,141	₩ 27,462,302,659
Weighted-average number of common shares outstanding (in shares) (*)	3,784,248,210	3,584,862,760
Basic earnings per share	₩ 9	₩ 8

(*) the weighted-average number of common shares outstanding during this reporting period

	Shares	Dates	Accumulated number
As of January 1, 2021	3,659,957,373	365	1,335,884,441,145
1st Acquisition of governmental investment	37,390,000	309	11,553,510,000
2nd Acquisition of governmental investment	55,540,000	276	15,329,040,000
3rd Acquisition of governmental investment	23,000,000	248	5,704,000,000
4th Acquisition of governmental investment	23,790,000	219	5,210,010,000
5th Acquisition of governmental investment	29,100,000	191	5,558,100,000
6th Acquisition of governmental investment	1,140,000	158	180,120,000
7th Acquisition of governmental investment	1,700,000	127	215,900,000
8th Acquisition of governmental investment	12,840,000	95	1,219,800,000
9th Acquisition of governmental investment	2,550,000	65	165,750,000
10th Acquisition of governmental investment	4,860,000	36	174,960,000
11th Acquisition of governmental investment	13,741,400	4	54,965,600
			÷365
The weighted average number of common shares			3,784,248,210

	Shares	Dates	Accumulated number
As of January 1, 2020	3,493,725,473	366	635,858,036,086
1st Acquisition of governmental investment	11,260,000	310	3,490,600,000
2nd Acquisition of governmental investment	20,920,000	288	6,024,960,000
3rd Acquisition of governmental investment	11,690,000	277	3,238,130,000
4th Acquisition of governmental investment	30,390,000	276	8,387,640,000
5th Acquisition of governmental investment	12,800,000	247	3,161,600,000

	Shares	Dates	Accumulated number
6th Acquisition of governmental investment	9,000,000	197	1,773,000,000
7th Acquisition of governmental investment	9,080,000	186	1,688,880,000
8th Acquisition of governmental investment	5,640,000	154	868,560,000
9th Acquisition of governmental investment	20,730,000	123	2,549,790,000
10th Acquisition of governmental investment	4,200,000	95	399,000,000
11th Acquisition of governmental investment	7,620,000	94	716,280,000
12th Acquisition of governmental investment	13,110,000	63	825,930,000
13th Acquisition of governmental investment	6,250,000	32	200,000,000
14th Acquisition of governmental investment	3,541,900	9	31,877,100
			÷366
The weighted average number of ordinary shares			3,584,862,760

37. Financial instruments by category

Financial assets and liabilities by categories as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021				
	Financial assets at FVPL	Financial assets at amortized cost	Financial assets at FVOCI	Financial assets designated as hedge accounting	Total
Current financial assets:					
Cash and cash equivalents	₩ -	₩ 557,477	₩ -	₩ -	₩ 557,477
Derivative assets	-	-	-	15,872	15,872
Financial assets at FVPL	486	-		-	486
Loans and receivables	-	1,468	-	-	1,468
Short-term financial instruments	-	60,000	-	-	60,000
Other financial assets	-	419,906	-	-	419,906
	486	1,038,851	-	15,872	1,055,209
Trade and other receivables	-	349,657	-	-	349,657
	₩ 486	₩ 1,388,508	₩ -	₩ 15,872	₩ 1,404,866

	December 31, 2021				
	Financial assets at FVPL	Financial assets at amortized cost	Financial assets at FVOCI	Financial assets designated as hedge accounting	Total
Non-current financial assets:					
Derivative assets	₩ -	₩ -	₩ -	₩ 165,749	₩ 165,749
Financial assets at FVPL	63,968	-	-	-	63,968
Financial assets at FVOCI	-	-	22,181	-	22,181
Loans and receivables	-	36,566	-	-	36,566
	63,968	36,566	22,181	165,749	288,464
Trade and other receivables	-	112,907	-	-	112,907
	₩ 63,968	₩ 149,473	₩ 22,181	₩ 165,749	₩ 401,371

	December 31, 2021			
	Financial liabilities at FVPL	Financial liabilities at amortized cost	Financial liabilities designated as hedge accounting	Total
Current financial liabilities:				
Financial liabilities at FVPL	₩ 105,125	₩ -	₩ -	₩ 105,125
Current portion of long-term borrowings	-	200,000	-	200,000
Current portion of bonds	-	3,036,360	-	3,036,360
Derivative liabilities	-	-	180	180

	December 31, 2021			
	Financial liabilities at FVPL	Financial liabilities at amortized cost	Financial liabilities designated as hedge accounting	Total
	105,125	3,236,360	180	3,341,665
Trade and other payables	-	965,297	-	965,297
Lease liabilities	-	2,930	-	2,930
	-	968,227	-	968,227
	₩ 105,125	₩ 4,204,587	₩ 180	₩ 4,309,892

	December 31, 2021			
	Financial liabilities at FVPL	Financial liabilities at amortized cost	Financial liabilities designated as hedge accounting	Total
Non-current financial liabilities:				
Financial liabilities at FVPL	₩ 6,446	₩ -	₩ -	₩ 6,446
Long-term borrowings	-	900,000	-	900,000
Bonds	-	26,731,737	-	26,731,737
Derivative liabilities	-	-	23,656	23,656
	6,446	27,631,737	23,656	27,661,839
Trade and other payables	-	203,675	-	203,675
Lease liabilities	-	1,772	-	1,772
	-	205,447	-	205,447
	₩ 6,446	₩ 27,837,184	₩ 23,656	₩ 27,867,286

	December 31, 2020				
	Financial assets at FVPL	Financial assets at amortized cost	Financial assets at FVOCI	Financial assets designated as hedge accounting	Total
Current financial assets:					
Cash and cash equivalents	₩ -	₩ 508,280	₩ -	₩ -	₩ 508,280
Derivative assets	-	-	-	5,058	5,058
Loans and receivables	-	6,775	-	-	6,775
Short-term financial assets	-	45,000	-	-	45,000
Other financial assets	-	323,468	-	-	323,468
	-	883,523	-	5,058	888,581
Trade and other receivables	-	297,385	-	-	297,385
	₩ -	₩ 1,180,908	₩ -	₩ 5,058	₩ 1,185,966

	December 31, 2020				
	Financial assets at FVPL	Financial assets at amortized cost	Financial assets at FVOCI	Financial assets designated as hedge accounting	Total
Non-current financial assets:					
Derivative assets	₩ -	₩ -	₩ -	₩ 47,177	₩ 47,177
Financial assets at FVPL	52,070	-	-	-	52,070
Financial assets at FVOCI	-	-	21,601	-	21,601
Loans and receivables	-	25,932	-	-	25,932
	52,070	25,932	21,601	47,177	146,780
Trade and other receivables	-	109,235	-	-	109,235
	₩ 52,070	₩ 135,167	₩ 21,601	₩ 47,177	₩ 256,015

	December 31, 2020			
	Financial liabilities at FVPL	Financial liabilities at amortized cost	Financial liabilities designated as hedge accounting	Total
Current financial liabilities:				
Current portion of long-term borrowings	₩ -	₩ 300,000	₩ -	₩ 300,000
Current portion of bonds		2,852,760	-	2,852,760

	December 31, 2020							
	Financial liabilities at FVPL		Financial liabilities at amortized cost		Financial liabilities designated as hedge accounting		Total	
Derivative liabilities		-		-		9,706		9,706
		-		3,152,760		9,706		3,162,466
Trade and other payables		-		777,225		-		777,225
Lease liabilities		-		3,624		-		3,624
		-		780,849		-		780,849
	₩	-	₩	3,933,609	₩	9,706	₩	3,943,315

	December 31, 2020							
	Financial liabilities at FVPL		Financial liabilities at amortized cost		Financial liabilities designated as hedge accounting		Total	
Non-current financial liabilities:								
Financial liabilities at FVPL	₩	113,827	₩	-	₩	-	₩	113,827
Long-term borrowings		-		700,000		-		700,000
Bonds		-		24,951,584		-		24,951,584
Derivative liabilities		-		-		106,960		106,960
		113,827		25,651,584		106,960		25,872,371
Trade and other payables		-		201,605		-		201,605
Lease liabilities		-		2,509		-		2,509
		-		204,114		-		204,114
	₩	113,827	₩	25,855,698	₩	106,960	₩	26,076,485

Gain and loss on financial instruments by category for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021		2020	
Financial assets at fair value through profit or loss:				
Loss on valuation, net	₩	(9,668)	₩	(11,909)
Gain on transaction, net		2,840		2,840
Dividend income		231		161
Financial assets at amortized cost:				
Interest income		9,183		9,858
Financial assets at fair value other comprehensive income:				
Comprehensive income (loss)		537		(262)
Derivative assets designated as hedge:				
Gain (loss) on transaction, net		2,522		(3,520)
Gain on valuation, net		178,582		2,701
Comprehensive income		16,705		13,897
Financial liabilities at fair value through profit or loss				
Interest expenses (*)		(1,494)		(1,267)
Loss on transaction, net		(3,312)		(2,828)
Gain on valuation, net		8,702		13,303
Financial liabilities at amortized cost:				
Interest expenses (*)		(600,997)		(624,874)
Gain on transaction, net		-		7
Gain (loss) on foreign currency transactions, net		(16,412)		3,520
Gain (loss) on foreign currency translations, net		(183,305)		102,339
Derivative liabilities designated as hedge:				
Gain on transaction, net		13,890		-
Gain (loss) on valuation, net		279		(108,410)
Comprehensive income		10,238		48,398

(*) Amount after deducting the capitalization of borrowing costs

38. Risk management

Risk management policy

The Group manages various risks that may arise from each field of business, and main risks are credit risk, market risk, interest risk and liquidity risk. These risks are recognized, measured and reported according to the basic policies established by the Group.

Capital risk management

The Group's capital management purpose is to maintain a strong capital base, so as to maintain investor, creditor and market confidence, and to sustain future development of the business. The Group's capital management is to maintain as a going concern and minimize the cost of capital, so as to maximize shareholder's return. The management of the Group also monitors periodically the level of capital structure and maintains the optimal capital structure.

The Group manages its capital based on debt-to-equity ratio. The net debt-to-equity ratio is calculated by dividing net debt by total equity plus net debt. Net debt are total borrowings less cash and cash equivalents, and total equity plus net debt is the "total equity" in the consolidated statement of financial position plus net debt.

The Group's strategy for 2021, which is line with 2020, is to maintain its net debt-to-equity ratio between 45% and 50%, and its credit rating at AAA (domestic credit rating). Its credit rating was maintained for 2021.

As of December 31, 2021 and 2020, net debt-to-equity ratio is as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
Total borrowings	₩	30,971,232	₩	28,912,582
Less: cash and cash equivalents		(557,477)		(508,280)
Net debt		30,413,755		28,404,302
Total equity		40,118,767		38,021,720
Total equity plus net debt		70,532,522		66,426,022
Net debt-to-equity ratio	₩	43.12%	₩	42.76%

Financial risk management

1) Purpose of financial risk management

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework. The Board of Directors has established the Risk Management Committee, which is responsible for developing and monitoring the Group's risk management policies. The committee reports regularly to the Board of Directors on its activities.

The Group's risk management policies are established to identify and analyze the risks faced by the Group, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Group's Audit Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group. The Group's Audit Committee is assisted in its oversight role by Internal Audit. Internal Audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Audit Committee

38. Risk management (Cont'd)

2) Credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021	December 31, 2020
Financial assets at fair value through profit or loss	₩ 64,455	₩ 52,070
Financial assets at fair value through other comprehensive income	22,181	21,601
Trade and other receivables, loans, short-term financial instruments and other financial assets	980,504	807,794
Cash and cash equivalents	557,477	508,280
Interest rate swap for hedge	10,938	10,248
Currency swap for hedge	170,684	41,987
	₩ 1,806,239	₩ 1,441,980

Impairment loss

Allowance for doubtful accounts is used to record impairment loss before the Group can have assurance of uncollectable of assets. If the Group determined that assets cannot be recovered, allowance for doubtful accounts is offset with financial assets. Impairment analysis of trade and other receivables are described in Note 8.

3) Liquidity risk

The contractual maturities of financial liabilities as of December 31, 2021 and 2020, excluding the impact of netting agreements, are as follows. Meanwhile, derivative liabilities were excluded because they were presented separately (Korean won in millions):

	December 31, 2021						
	Carrying amount	Contractual cash flow	Within 6 months	6–12 months	1 year– 2 years	2–5 years	More than 5 years
Non-derivative financial liabilities:							
Trade and other payables	₩ 1,173,674	₩ 1,187,574	₩ 740,693	₩ 228,174	₩ 92,827	₩ 125,880	₩ -
Unsecured bonds	29,871,232	29,871,232	1,008,710	2,130,785	6,355,771	5,011,552	15,364,414
Unsecured long-term borrowings	1,100,000	1,100,000	200,000	-	400,000	500,000	-
	₩ 32,144,906	₩ 32,158,806	₩ 1,949,403	₩ 2,358,959	₩ 6,848,598	₩ 5,637,432	₩ 15,364,414

	December 31, 2020						
	Carrying amount	Contractual cash flow	Within 6 months	6–12 Months	1 year– 2 years	2–5 years	More than 5 years
Non-derivative financial liabilities:							
Trade and other payables	₩ 984,964	₩ 999,609	₩ 555,877	₩ 225,484	₩ 93,274	₩ 124,974	₩ -
Unsecured bonds	27,912,582	27,919,302	1,077,048	1,776,400	3,098,636	8,311,649	13,655,569
Unsecured long-term borrowings	1,000,000	1,000,000	-	300,000	200,000	500,000	-
	₩ 29,897,546	₩ 29,918,911	₩ 1,632,925	₩ 2,301,884	₩ 3,391,910	₩ 8,936,623	₩ 13,655,569

The Group does not expect the cash flows included in the maturity analysis to occur significantly earlier or at significantly different amounts.

38. Risk management (Cont'd)

The periods in which the cash flows associated with cash flow hedges are expected to occur as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021						
	Carrying amount	Contractual cash flow	Within 6 months	6–12 months	1 year– 2 years	2–5 years	More than 5 years
Currency swap:							
Assets	₩ 170,683	₩ 170,683	₩ 3,092	₩ 7,899	₩ 22,878	₩ 92,519	₩ 44,296
Liabilities	(5,407)	(5,407)	-	-	-	(4,218)	(1,189)
Interest rate swap:							
Assets	₩ 15,190	₩ 15,190	₩ 347	₩ 5,021	₩ 303	₩ 5,753	₩ 3,766
Liabilities	(26,864)	(26,864)	(180)	(1,990)	(2,654)	(11,987)	(10,053)

	December 31, 2020						
	Carrying amount	Contractual cash flow	Within 6 months	6–12 months	1 year– 2 years	2–5 years	More than 5 years
Currency swap:							
Assets	₩ 41,987	₩ 41,987	₩ 5,058	₩ -	₩ -	₩ 24,360	₩ 12,569
Liabilities	(86,713)	(86,713)	-	(7,851)	(39,809)	(21,337)	(17,715)
Interest rate swap:							
Assets	₩ 20,059	₩ 20,059	₩ -	₩ -	₩ 10,345	₩ 4,636	₩ 5,079
Liabilities	(143,780)	(143,780)	-	(1,855)	(117,082)	(18,048)	(6,796)

4) Currency risk

Exposure to currency risk

The Group's exposure to foreign currency risk as of December 31, 2021 and 2020 is as follows (Korean won in millions):

	December 31, 2021						
	USD	EUR	HKD	CHF	SEK	CAD	AUD
Liabilities:							
Bonds	₩ 1,801,960	₩ 91,279	₩ 190,342	₩ 298,418	₩ 94,349	₩ 125,632	₩ 386,501

	December 31, 2020							
	USD	EUR	HKD	CHF	CHN	SEK	CAD	AUD
Liabilities:								
Bonds	₩ 1,436,160	₩ 91,000	₩ 175,718	₩ 283,896	₩ 217,048	₩ 95,954	₩ 115,196	₩ 376,452

Exchange rates applied as of and for the years ended December 31, 2021 and 2020 are as follows (Korean won):

	Average rate		Reporting date spot rate	
	2021	2020	December 31, 2021	December 31, 2020
USD	₩ 1,144.42	₩ 1,082.70	₩ 1,185.50	₩ 1,088.00
EUR	1,352.79	1,345.99	1,342.34	1,338.24
HKD	147.23	152.14	152.03	140.35
CHF	1,251.65	1,257.34	1,297.47	1,234.33
CNH	177.43	170.88	186.26	166.96
SEK	133.35	128.42	131.04	132.77
CAD	913.26	879.91	930.61	853.30
AUD	859.42	813.48	858.89	836.56

38. Risk management (Cont'd)

Sensitivity analysis

If the foreign exchange rate against the Korean won was high as of December 31, 2021 and 2020, the Group's equity and profit or loss would have fluctuated. This analysis assumes a change in the degree to which the Group believes it is reasonably possible at the end of each term. In addition, it was assumed that other variables, such as interest rates, do not change when analyzing sensitivity. Specific equity and profit or loss variability effects, when the exchange rate increase 10% are as follows:

	December 31, 2021				December 31, 2020			
	Equity		Profit or loss		Equity		Profit or loss	
USD	₩	(180,196)	₩	(180,196)	₩	(143,616)	₩	(143,616)
EUR		(9,128)		(9,128)		(9,100)		(9,100)
HKD		(19,034)		(19,034)		(17,572)		(17,572)
CHF		(29,842)		(29,842)		(28,390)		(28,390)
CNY		-		-		(21,705)		(21,705)
SEK		(9,435)		(9,435)		(9,559)		(9,559)
CAD		(12,563)		(12,563)		(11,520)		(11,520)
AUD		(38,650)		(38,650)		(37,645)		(37,645)

5) Interest rate risk

The Group's interest-bearing financial liabilities as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
Fixed-rate instruments:				
Financial liabilities	₩	30,611,250	₩	28,552,615
Variable-rate instruments:				
Financial liabilities	₩	359,982	₩	359,967

Cash flow sensitivity analysis for variable-rate instruments

A change of 100 basis points ("bps") in interest rates as of December 31, 2021 and 2020 would have increased (decreased) equity and profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for 2020 (Korean won in millions):

	Profit or loss				Equity			
	100 bp increase		100 bp decrease		100 bp increase		100 bp decrease	
As of December 31, 2021:								
Variable-rate instruments	₩	(3,600)	₩	3,600	₩	(3,600)	₩	3,600
As of December 31, 2020:								
Variable-rate instruments	₩	(3,600)	₩	3,600	₩	(3,600)	₩	3,600

6) Major assets and liabilities with uncertainties in underlying assumptions

A sensitivity analysis on the Group's defined benefit obligation assuming a 1% increase or 1% decrease in various assumptions as of December 31, 2021 and 2020 are as follows (Korean won in millions):

		December 31, 2021				December 31, 2020			
Assumptions	Accounts	1% increase		1% decrease		1% increase		1% decrease	
Future salary increases	Defined benefit obligation	₩	(34,322)	₩	39,700	₩	(27,259)	₩	31,872
Discount rate	Defined benefit obligation		39,291		(33,448)		31,803		(27,709)

38. Risk management (cont'd)

Fair value measurements

The fair value of financial instruments traded in active markets is calculated based on the notified market price at the end of the reporting period. Published market prices of financial assets that the Group retains are bid prices.

The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group uses a variety of assessment techniques and establishes a hypothesis based on current market conditions at the end of the reporting period.

The Group's fair value assessment techniques use recent transactions between independent parties that have reasonable judgment and willingness to deal with, referring the other financial instrument's present value that is substantially equal, discounting estimated cash flow method, option-pricing model, etc. For example, the fair value of interest rate swaps is calculated as the present value of estimated future cash flows, and the fair value of foreign exchange forward contracts is calculated by applying published forward rate at the end of the reporting period.

- Debt instruments, including bonds
The fair value of debt instruments, such as bonds, has been determined by applying the discounted cash flow method. The discount rate used to discount cash flows was determined by swap rate and credit spreads as a base that are published in market for debenture having similar credit rating and period like fair value measurement debt instruments, including bonds. As the inputs of the discount rate have a significant impact on the fair value of debt instruments, including bonds derived on the basis of the available information observed in the market, the Group has classified the fair value measurement of debt instruments, including bonds, in the Level 2 of the fair value hierarchy.

- Unmarketable shares
The fair value of unlisted shares is measured using cash flow discount model in order to estimate the future cash flows business plans and sales growth based on the industry situation and pretax operating margin using assumptions that are not based on observable market price or percentage of such weighted-average cost of capital assumption or estimations. The weighted-average cost of capital used to discount the future cash flow was estimated by utilizing the data of similar listed companies applying the capital asset pricing model. The Group has determined that as major assumptions and estimates mentioned above have a significant impact on the fair value of unlisted shares, the Group classifies the fair value measurement of unlisted shares in the Level 3 of the fair value hierarchy.

1) Fair values versus carrying amount

The fair values of financial assets and liabilities, together with the carrying amounts shown in the consolidated statements of financial position, as of December 31, 2021 and 2020 are as follows (Korean won in millions):

	December 31, 2021		December 31, 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Assets carried at fair value:				
Current derivatives assets	₩ 15,872	₩ 15,872	₩ 5,058	₩ 5,058
Financial assets at FVPL	64,455	64,455	52,070	52,070
Non-current financial assets at FVOCI	22,181	22,181	21,601	21,601
Non-current derivatives assets	165,749	165,749	47,177	47,177
	₩ 268,257	₩ 268,257	₩ 125,906	₩ 125,906

38. Risk management (cont'd)

Assets carried at amortized cost:								
Cash and cash equivalents	₩	557,477	₩	557,477	₩	508,280	₩	508,280
Short-term financial instruments		60,000		60,000		45,000		45,000
Short-term loans and receivables		1,468		1,468		6,775		6,775
Other financial assets		419,906		419,906		323,468		323,468
Trade and other receivables		349,657		349,657		297,385		297,385
Long-term loans and receivables		36,566		36,566		25,932		25,932
Long-term trade and other receivables		112,907		112,907		109,235		109,235
	₩	1,537,981	₩	1,537,981	₩	1,316,075	₩	1,316,075
Liabilities carried at fair value:								
Current financial liabilities at FVPL	₩	105,125	₩	105,125	₩	-	₩	-
Current derivatives liabilities		180		180		9,706		9,706
Non-current financial liabilities at FVPL		6,446		6,446		113,827		113,827
Non-current derivatives liabilities		23,656		23,656		106,960		106,960
	₩	135,407	₩	135,407	₩	230,493	₩	230,493
Liabilities carried at amortized cost:								
Trade and other payables	₩	965,298	₩	965,298	₩	777,225	₩	777,225
Current portion of long-term borrowings		200,000		200,000		300,000		300,000
Current portion of bonds		3,036,360		3,036,360		2,852,760		2,852,760
Long-term trade and other payables		203,674		203,674		201,605		201,605
Long-term borrowings		900,000		900,000		700,000		700,000
Bonds		26,731,737		26,731,737		24,951,584		24,951,584
Lease liabilities		4,702		4,702		6,134		6,134
	₩	32,041,771	₩	32,041,771	₩	29,789,308	₩	29,789,308

2) Fair value hierarchy

The different levels of fair values of financial assets and liabilities have been defined as follows:

- ✓ Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- ✓ Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)
- ✓ Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

38. Risk management (Cont'd)

Financial instruments that are measured subsequent to initial recognition at fair value by fair value hierarchy levels as of December 31, 2021 and December 31, 2020 are as follows (Korean won in millions):

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
Current derivatives assets	₩ -	₩ 15,872	₩ -	₩ 15,872
Current financial assets at FVPL	-	486	-	486
Non-current derivatives assets	-	165,749	-	165,749
Non-current financial assets at FVPL	-	3,766	60,202	63,968
Non-current financial assets at FVOCI	-	-	22,181	22,181
Current derivatives liabilities	-	180	-	180
Current financial liabilities at FVPL	-	105,125	-	105,125
Non-current financial liabilities at FVPL	-	6,446	-	6,446
Non-current derivatives liabilities	-	23,656	-	23,656

	December 31, 2020			
	Level 1	Level 2	Level 3	Total
Non-current financial assets at FVOCI	₩ -	₩ -	₩ 21,601	₩ 21,601
Non-current financial assets at FVPL	-	9,811	42,258	52,069
Current derivatives assets	-	5,058		5,058
Non-current derivatives assets	-	47,177	-	47,177
Non-current financial liabilities at FVPL	-	113,827	-	113,827
Current derivatives liabilities	-	9,706	-	9,706
Non-current derivatives liabilities	-	106,960	-	106,960

The method used for the valuation of financial assets at FVPL and financial assets at FVOCI measured at fair value as of December 31, 2021 is as follows:

① Assumption (Korean won in millions)

	Valuation method	Discount rate
Seoul-Chuncheon Highway Co., Ltd	Discounted cash flow method	11.90%
The 2nd Seoul-Incheon Linking Highway Co., Ltd	Dividend Discount method	11.97%
Seoul North Highway Corporation	Discounted cash flow method	11.90%
DREAMLINE Corporation	Discounted cash flow method	12.42%
Korea Overseas Infrastructure & Urban Development Corporation	Net Asset Value Evaluation Method	-

② Method (Korean won in millions)

	Book value before valuation	Valuation gain (before tax)	Book value	Fair value
Seoul-Chuncheon Highway Co., Ltd	14,701	1,052	15,753	15,753
The 2nd Seoul-Incheon Linking Highway Co., Ltd	3,355	(61)	3,294	3,294
Seoul North Highway Corporation	4,525	482	5,007	5,007
DREAMLINE Corporation	946	(9)	937	937
Korea Overseas Infrastructure & Urban Development Corporation	20,591	546	21,137	21,137

39. Related-party transactions

Details of the Group's related parties as of December 31, 2021 are as follows:

	Name
Parent company	Ministry of Land, Infrastructure and Transport
Associates	Korea Construction Management Corp.
	Expressway Solar Power Co., Ltd.
	Highway solar Co., Ltd.
Joint venture	Busan-Ulsan Expressway Co., Ltd.

Transactions with related parties for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

Related parties	Transactions	2021	2020
Busan-Ulsan Expressway Co., Ltd.	Revenue	₩ 22,765	₩ 21,536
Korea Construction Management Corporation	Cost of sales	2,621	3,734
Expressway Solar Power Co., Ltd.	Revenue	1,336	1,332
Highway solar Co., Ltd.	Revenue	1,093	1,090

Receivables and payables with related parties as of December 31, 2021 and 2020 are as follows (Korean won in millions):

Related parties	Receivables and payables	December 31, 2021	December 31, 2020
Busan-Ulsan Expressway Co., Ltd.	Other accounts receivable	₩ 4,328	₩ 11
	Other accounts payable	275	103
Korea Construction Management Corporation	Other accounts payable	907	705
Expressway Solar Power Co., Ltd.	Other accounts receivable	-	28
Highway solar Co., Ltd.	Other accounts receivable	-	24

There has been no impairment loss on receivables above with related parties for the years ended December 31, 2021 and 2020.

The Government of the Republic of Korea (Ministry of Land, Infrastructure and Transport and Ministry of Economy and Finance) controls the Group and participated in the capital increase of ₩2,057 million and ₩1,662 million for the years ended December 31, 2021 and 2020, respectively.

Details of key management personnel compensation for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Salaries	₩ 1,137	₩ 982
Retirement benefits	-	37
	₩ 1,137	₩ 1,019

40. Consolidated statements of cash flows

Significant non-cash investing activities and financing activities for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

	2021	2020
Reclassification of long-term borrowings to current portion	₩ 200,000	₩ 300,000
Reclassification of bonds to current portion	3,036,628	2,853,448
Reclassification of construction-in-progress (property and equipment)	121,943	167,229
Reclassification of construction-in-progress (investment properties)	79,053	83,429
Reclassification of intangible assets under development	813,496	3,016,715
Reclassification of short-term leasehold deposits received to long-term leasehold deposits received	-	133,830

Changes in liabilities arising from financing activities for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions):

2021			Non-cash changes			
	Beginning balance	Cash flows	Transfer	Changes in exchange rate	Others	Ending balance
Current portion of long-term borrowings	₩ 300,000	₩ (300,000)	₩ 200,000	₩ -	₩ -	₩ 200,000
Current portion of bonds	2,852,760	(2,853,920)	3,036,360	-	1,160	3,036,360
Current lease liabilities	3,624	(4,163)	1,879	-	1,590	2,930
Long-term borrowings	700,000	400,000	(200,000)	-	-	900,000
Bonds	24,951,584	4,630,940	(3,036,360)	183,305	2,268	26,731,737
Non-current lease liabilities	2,510	-	(1,879)	-	1,141	1,772
	₩ 28,810,478	₩ 1,872,857	₩ -	₩ 183,305	₩ 6,159	₩ 30,872,799

2020			Non-cash changes			
	Beginning balance	Cash flows	Transfer	Changes in exchange rate	Others	Ending balance
Current portion of long-term borrowings	₩ -	₩ -	₩ 300,000	₩ -	₩ -	₩ 300,000
Current portion of bonds	2,922,839	(2,923,108)	2,852,760	-	269	2,852,760
Current lease liabilities	1,411	(4,096)	6,309	-	-	3,624
Long-term borrowings	900,000	100,000	(300,000)	-	-	700,000
Bonds	23,039,018	4,865,435	(2,852,760)	(102,339)	2,230	24,951,584
Non-current lease liabilities	1,787	-	(6,309)	-	7,031	2,509
	₩ 26,865,055	₩ 2,038,231	₩ -	₩ (102,339)	₩ 9,530	₩ 28,810,477

41. Contingent liabilities and assets

Details of the Group's major pending lawsuits involved in as a defendant as of December 31, 2021 are as follows (Korean won in millions):

Court	Details	Litigation amount	Progress
Seoul Central District Court	Claims for payment	₩ 15,241	2nd trial
Suwon District Court	Claims for payment	9,874	1st trial
Changwon District Court	Claims for reimbursement	7,817	1st trial
		₩ 32,932	

41. Contingent liabilities and assets (cont'd)

As of December 31, 2021, including the above litigation, there were a total of 473 litigations pending by the Group as defendants (Litigation amount: ₩869,642 million). Except for a recognized provision of ₩619,389 million, no other provision was recognized as the Group was not able to reasonably estimate the results of the lawsuits and their impacts on the consolidated financial statements as of December 31, 2021.

Significant agreements with financial institutions as of December 31, 2021 are as follows (Korean won in millions):

Financial institutions	Commitments	Limits	Amounts outstanding
KEB Hana Bank	Working capital loan	₩ 200,000	₩ -
	Bill acceptance	1,100,000	1,100,000
Kookmin Bank	General loan	80,000	-

As of December 31, 2021, Seoul Guarantee Insurance Company provides performance guarantees of ₩90,209 million to the Group.

As of December 31, 2021, except for providing interests in a joint venture as collaterals (described in Note 13), the Group has not provided any guarantees to the third parties.

42. Authorization for issue of the consolidated financial statements

The Group's consolidated financial statements were authorized for issue at the Board of Directors' meeting on March 10, 2022 and are to be authorized for issue finally at the general meeting of shareholders on March 28, 2022.

43. Uncertainty of the impact of Covid-19

In order to prevent the spread of Covid-19, a various prevention and control measures, including restrictions on traveling are being implemented worldwide, and as a result, the global economy has been extensively affected. In addition, governments are implementing various support measures to address Covid-19.

The Group prepared its consolidated financial statements considering the impact of Covid-19 and government supporting measures on the Group's consolidated financial statements in future periods. However, there is material uncertainty exist in estimating the duration and ultimate impact of Covid-19 on the Group.

Building a better
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Independent auditor's report

The Shareholders and Board of Directors
Korea Expressway Corporation

Opinion

We have audited the consolidated financial statements of Korea Expressway Corporation (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2020 and 2019, and the consolidated statements of profit or loss and other comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2020 and 2019, and its consolidated financial performance and its consolidated cash flows for the years then ended, in accordance with Government Accounting Standards for Public Enterprises and Quasi-government Organizations in the Republic of Korea ("Government Accounting Standards").

Basis for opinion

We conducted our audit in accordance with Korean Auditing Standards ("KGAAS"). 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 the Republic of Korea, 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.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Government Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of the 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.

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 KGAAS 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 KGAAS, 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, but not for the purpose of expressing 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 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 those charged with governance 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 those charged with governance 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.

March 23, 2021

Ernst & Young Han Young

This audit report is effective as of March 23, 2021, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's report to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

KOREA EXPRESSWAY CORPORATION AND ITS SUBSIDIARIES

Consolidated financial statements
for the years ended December 31, 2020 and 2019

"The accompanying consolidated financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Group."

Kim, Jin-sook
Chief Executive Officer
Korea Expressway Corporation

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(Telephone) +82-1588-2504

Korea Expressway Corporation and its subsidiaries
Consolidated statements of financial position
as of December 31, 2020 and 2019
(Korean won in thousands)

	Notes	December 31, 2020	December 31, 2019
Assets			
Current assets:			
Cash and cash equivalents	5,37	₩ 508,279,724	₩ 737,413,299
Short-term loans and receivables	10,37	6,774,716	5,164,026
Short-term financial assets	6,37	45,000,000	30,000,000
Derivatives assets	7,37	5,057,996	4,432,529
Other financial assets	37	323,468,304	163,299,665
Trade and other receivables	8,37,39	297,384,712	234,038,415
Inventories	11	21,092,389	21,586,681
Current tax assets		5,155,371	-
Other non-financial assets	12	5,823,464	5,484,449
		1,218,036,676	1,201,419,064
Non-current assets:			
Financial assets at fair value through profit or loss	7,9,37	52,069,653	49,338,242
Financial assets at fair value through other comprehensive income	9,37	21,600,779	21,803,130
Derivatives assets	7,37	47,176,977	51,376,411
Long-term loans and receivables	10,37	25,932,010	27,618,988
Trade and other receivables	8,37	109,234,601	102,762,326
Property, plant and equipment	14	1,110,043,210	1,075,360,776
Investment properties	15	1,562,604,806	1,394,274,454
Intangible assets	16	65,029,323,081	61,843,969,934
Investments in associates and joint ventures	13	3,873,884	6,434,923
Other non-financial assets	12	7,671,922	7,050,975
		67,969,530,923	64,579,990,159
Total assets		**₩ 69,187,567,599**	**₩ 65,781,409,223**

(Continued)

Korea Expressway Corporation and its subsidiaries
Consolidated statements of financial position
as of December 31, 2020 and 2019 (cont'd)

(Korean won in thousands)

	Notes	December 31, 2020	December 31, 2019
Liabilities			
Current liabilities:			
Trade and other payables	17,37	₩ 780,849,364	₩ 894,538,558
Current portion of long-term borrowings	18,37	300,000,000	-
Current portion of bonds	18,37	2,852,759,549	2,922,838,745
Derivatives liabilities	7,37	9,705,987	2,331,004
Current tax liabilities		7,626,567	123,993,329
Provisions	21	128,795,539	117,011,037
Other non-financial liabilities	23	259,334,421	136,269,781
		4,339,071,427	4,196,982,454
Non-current liabilities:			
Financial liabilities at fair value through profit or loss	7,18,37	113,827,430	122,647,488
Trade and other payables	17,37	204,114,457	591,626,203
Long-term borrowings	18,37	700,000,000	900,000,000
Bonds	18,37	24,951,584,499	23,039,017,778
Derivatives liablities	7,37	106,959,655	70,974,799
Other non-financial liabilities	23	34,412,764	55,008,790
Employee benefits liabilities	20	123,142,185	151,612,378
Provisions	21	592,735,475	325,762,686
		26,826,776,465	25,256,650,122
Total liabilities		**31,165,847,892**	**29,453,632,576**
Equity			
Equity attributable to the owners of the parent:			
Share capital	1,25	36,599,573,730	34,937,254,730
Share discount		(7,979,131)	(6,950,443)
Retained earnings	26	1,455,835,486	1,485,204,033
Other components of equity	27	(25,710,378)	(87,731,673)
Non-controlling interests		-	-
Total equity		**38,021,719,707**	**36,327,776,647**
Total liabilities and equity		**₩ 69,187,567,599**	**₩ 65,781,409,223**

The accompanying notes are an integral part of the consolidated financial statements.

Korea Expressway Corporation and its subsidiaries
Consolidated statements of profit or loss and other comprehensive income
for the years ended December 31, 2020 and 2019
(Korean won in thousands, except earnings per share)

	Notes	2020	2019
Revenue	4,28,39	₩ 9,557,502,707	₩ 8,721,882,083
Cost of sales	35,39	8,612,407,790	7,200,637,157
Gross profit		**945,094,917**	**1,521,244,926**
Selling and administrative expenses	29,35	322,135,585	282,506,411
Operating profit	4	**622,959,332**	**1,238,738,515**
Other income	30	126,888,716	105,239,159
Other expenses	30	342,343,362	349,269,390
Other loss,net	31	(14,719,388)	(20,390,467)
Finance income	32	173,135,852	143,825,381
Finance costs	33	791,213,289	851,290,019
Share of profit (loss) of associates and joint ventures	13	(2,549,606)	448,825
Profit (loss) before income tax		**(227,841,745)**	**267,302,004**
Income tax expense (benefit)	34	**(255,304,048)**	**167,671,998**
Profit for the year		**27,462,303**	**99,630,006**
Other comprehensive income for the year, net of tax			
Items that will not be reclassified to profit or loss in subsequent periods:			
Remeasurements of defined benefit plans	20	(11,449,427)	(17,446,363)
Share of other comprehensive loss of associates and joint ventures	13	(70,157)	(70,157)
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	9	(262,238)	331,115
		(11,781,822)	(17,185,405)
Items that may be reclassified to profit or loss in subsequent periods:			
Gains on hedging instruments in a cash flow hedges	27	62,294,966	26,481,760
Share of other comprehensive income (loss) of associates and joint ventures	13	58,724	(385,588)
		62,353,690	26,096,172
Total comprehensive income for the year, net of tax		**₩ 78,034,171**	**₩ 108,540,773**
Profit for the year attributable to:			
Owners of the parent		27,462,303	99,630,006
Non-controlling interests		-	-
		27,462,303	99,630,006
Total comprehensive income for the year attributable to:			
Owners of the parent		78,034,171	108,540,773
Non-controlling interests		-	-
		78,034,171	108,540,773
Earnings per share:	36		
Basic earnings per share		₩ 8	₩ 29
Diluted earnings per share		₩ 8	₩ 29

The accompanying notes are an integral part of the consolidated financial statements.

Korea Expressway Corporation and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2020 and 2019
(Korean won in thousands)

	Share capital	Retained earnings	Other components of equity	Total	Non-controlling interests	Total equity
As of January 1, 2019	**₩ 33,483,466,525**	**₩ 1,438,939,916**	**₩ (114,088,803)**	**₩ 34,808,317,638**	**₩ -**	**₩ 34,808,317,638**
Total comprehensive income for the year :						
Profit for the year	-	99,630,006	-	99,630,006	-	99,630,006
Other comprehensive income	-	(17,446,363)	26,357,130	8,910,767	-	8,910,767
	-	82,183,643	26,357,130	108,540,773	-	108,540,773
Transactions with the owners of the parent recognized directly in equity:						
Capital increase by issuing new shares	1,448,009,000	-	-	1,448,009,000	-	1,448,009,000
Dividends paid	-	(30,140,321)	-	(30,140,321)	-	(30,140,321)
Share discount	(6,950,443)	-	-	(6,950,443)	-	(6,950,443)
	1,441,058,557	(30,140,321)	-	1,410,918,236	-	1,410,918,236
Amortization of share discount	5,779,205	(5,779,205)	-	-	-	-
As of December 31, 2019	**₩ 34,930,304,287**	**₩ 1,485,204,033**	**₩ (87,731,673)**	**₩ 36,327,776,647**	**₩ -**	**₩ 36,327,776,647**
As of January 1, 2020	**₩ 34,930,304,287**	**₩ 1,485,204,033**	**₩ (87,731,673)**	**₩ 36,327,776,647**	**₩ -**	**₩ 36,327,776,647**
Total comprehensive income for the year :						
Profit for the year	-	27,462,303	-	27,462,303	-	27,462,303
Other comprehensive income	-	(11,449,427)	62,021,295	50,571,868	-	50,571,868
	-	16,012,876	62,021,295	78,034,171	-	78,034,171
Transactions with the owners of the parent recognized directly in equity:						
Capital increase by issuing new shares	1,662,319,000	-	-	1,662,319,000	-	1,662,319,000
Dividends paid	-	(38,430,980)	-	(38,430,980)	-	(38,430,980)
Share discount	(7,979,131)	-	-	(7,979,131)	-	(7,979,131)
	1,654,339,869	(38,430,980)	-	1,615,908,889	-	1,615,908,889
Amortization of share discount	6,950,443	(6,950,443)	-	-	-	-
As of December 31, 2020	**₩ 36,591,594,599**	**₩ 1,455,835,486**	**₩ (25,710,378)**	**₩ 38,021,719,707**	**₩ -**	**₩ 38,021,719,707**

The accompanying notes are an integral part of the consolidated financial statements.

(Korean won in thousands)

		2020		2019
Cash flows from operating activities:				
Profit for the year	₩	27,462,303	₩	99,630,006
Adjustments to reconcile profit for the year to net cash flows provided by operating activities:				
Employee benefits		133,433,772		126,877,886
Severance and retirement benefits		61,016,482		59,508,061
Depreciation		177,729,805		168,402,146
Amortization		1,588,287,168		1,314,116,303
Bad debt expenses		2,638,102		2,915,697
Increase in provisions		287,166,440		293,347,056
Other bad debt expenses		646,007		1,319,589
Interest expenses		626,140,229		722,541,823
Income tax expense		(255,304,048)		167,671,999
Income from incidental business		(8,402,974)		(15,548,323)
Reversal of provisions		(20,193,651)		(174,942)
Gain on contribution of assets		(13,765,608)		(19,997,607)
Reversal of other allowance for doubtful accounts		-		(496,883)
Interest income		(9,858,337)		(9,648,377)
Dividends income		(161,345)		(28,482)
Gain on disposal of property and equipment, net		(546,603)		(1,084,764)
Loss on disposal of investment properties, net		5,195,821		469,186
Gain on disposal of intangible assets, net		(5,592,128)		(4,039,036)
Loss (gain) on disposal of financial assets, net		(11,911)		458,860
Gain on valuation of financial assets at fair value through profit or loss, net		(1,394,372)		(8,038,795)
Loss (gain) on valuation of derivative instruments, net		102,620,640		(77,305,590)
Loss (gain) on transation of derivative instruments, net		3,520,000		(12,359,930)
Loss on hedged item related to fair value hedge		3,088,131		2,272,719
Loss (gain) on foreign currency translations, net		(103,098,049)		77,232,719
Loss (gain) on valuation of investments in associates and joint ventures		2,549,606		(448,825)
Loss (gain) on other accounts		(4,490,716)		1,276,371
	₩	2,571,212,461	₩	2,789,238,861

(Continued)

Korea Expressway Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2020 and 2019 (cont'd)
(Korean won in thousands)

		2020		2019
Cash flows from operating activities:				
Changes in operating assets and liabilities:				
Short-term loans	₩	(1,610,690)	₩	(3,132,430)
Other current financial assets		(160,174,488)		(134,740,918)
Other accounts receivable		(56,371,107)		(56,798,399)
Accrued income		12,334		1,853,135
Short-term deposits		(3,079,867)		1,974,492
Inventories		494,291		2,580,852
Short-term advance payments		(34,752)		-
Short-term prepaid expenses		(421,653)		726,602
Greenhouse gas emissions rights		134,843		(268,515)
Long-term loans		1,686,979		2,513,894
Long-term deposits		(5,947,434)		(18,905,982)
Long-term prepaid expenses		(620,946)		709,903
Short-term other accounts payable		(35,682,791)		(58,463,657)
Short-term accrued expenses		9,841,729		12,846,342
Short-term leasehold deposits		39,487,772		17,101,251
Short-term other deposits		341,033		(306,875)
Short-term advances from customers		185,588,946		13,655,490
Short-term unearned revenue		2,148,177		(598,077)
Withholdings		(53,936,325)		8,029,493
Provision for short-term employee benefits		(114,438,248)		(84,558,764)
Provision for greenhouse gas		(1,357,339)		-
Long-term leasehold deposits		(230,737,474)		6,158,481
Long-term unearned revenue		(2,859,375)		17,322,213
Payments of retirement and severance benefits		(1,811,506)		(1,056,880)
Plan assets		(93,946,036)		(34,900,000)
Other long-term employee benefits		(10,234,185)		(10,147,040)
Provisions for litigation		-		(145,547)
Increase in government grants for consignment management service		338,880,660		420,083,624
Decrease in government grants for consignment management service		(303,301,591)		(274,379,462)
		(497,949,043)		(172,846,774)
Dividends received		161,345		28,482
Interest paid		(931,616,706)		(714,039,866)
Interest received		9,387,972		9,717,522
Income taxes refunded (paid)		126,155,349		(84,313,987)
Net cash provided by operating activities	₩	1,304,813,681	₩	1,927,414,244

(Continued)

Korea Expressway Corporation and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2020 and 2019 (cont'd)
(Korean won in thousands)

		2020		2019
Cash flows from investing activities:				
Proceeds from disposal of property and equipment	₩	3,134,870	₩	1,453,817
Proceeds from disposal of investment property		46,657		234,326
Proceeds from disposal of intangible assets		7,318,129		3,754,656
Acquisition of financial assets at fair value through other comprehensive income		(59,888)		(4,325)
Acquisition of financial assets at fair value through profit or loss		(10,157,099)		(10,116,667)
Acquisition of property and equipment		(156,323,557)		(145,849,515)
Acquisition of short-term financial assets		(15,000,000)		(15,000,000)
Acquisition of investment properties		(207,492,943)		(107,578,346)
Acquisition of intangible assets		(4,774,733,313)		(3,864,057,977)
Net cash used in investing activities		(5,153,267,144)		(4,137,164,031)
Cash flows from financing activities:				
Proceeds from long-term borrowings		100,000,000		-
Proceeds from bonds		4,865,435,389		3,909,599,495
Proceeds from capital increase by issuing new shares		1,654,339,869		1,441,058,557
Repayments of current portion of long-term borrowings		-		(100,000,000)
Repayments of bonds		(2,923,108,089)		(2,878,807,730)
Repayments of lease liabilities		(4,096,284)		(3,426,005)
Dividends paid		(38,430,981)		(30,140,322)
Net cash provided by financing activities		3,654,139,904		2,338,283,995
Net increase (decrease) in cash and cash equivalents	₩	(194,313,559)	₩	128,534,208
Net foreign exchange difference		759,053		(20,238)
Cash and cash equivalents at the beginning of the year		1,050,151,713		921,637,743
Cash and cash equivalents at the end of the year before government grants for consignment management service		856,597,207		1,050,151,713
Less: government grants for consignment management service		(348,317,483)		(312,738,414)
Cash and cash equivalents at the end of the year	₩	**508,279,724**	₩	**737,413,299**

The accompanying notes are an integral part of the consolidated financial statements.

1. General

Korea Expressway Corporation (the "Company") was established on February 15, 1969, under the *Korea Expressway Corporation Act*. The Company is engaged in the construction and operation of an expressway network in the Republic of Korea. The Company generates its revenue primarily from tolls collected from motorists for the use of the expressways managed by the Company. The Company also receives lease payments paid by operations of service areas and oil stations located at various points along the expressways and fees from certain services for the Korean Government (the "Government"), including supervision of the government construction projects in various locations adjacent to the expressways.

As of December 31, 2020, the Company's shareholders are as follows:

Shareholders	Number of shares	Ownership (%)
Ministry of Land, Infrastructure and Transport	3,187,198,503	87.08
Ministry of Strategy and Finance	35,842,408	0.98
Korea EXIM Bank	328,714,464	8.99
Korea Development Bank	92,628,550	2.53
Korea Housing Finance Corporation	15,000,000	0.41
Kookmin Bank	573,448	0.01
	3,659,957,373	100.00

The Group

Details of the Company and its subsidiaries (collectively referred to as the "Group") as of December 31, 2020 and 2019 are as follows (Korean won in millions):

As of December 31, 2020:

Company	Country of incorporation	Business area	Assets	Liabilities	Sales	Profit for the year
Korea Expressway Corporation	Korea	Construction and management of roads	₩ 69,181,607	₩ 31,149,822	₩ 9,556,816	₩ 30,535
Korea Expressway Corporation Facility Management Co., Ltd.	Korea	Building(facilities) and maintenance, etc.	3,454	2,698	15,098	293
Korea Expressway Corporation Service Co., Ltd.	Korea	Toll road and facility usage fee	54,585	43,526	310,822	8,059

As of December 31, 2019:

Company	Country of incorporation	Business area	Assets	Liabilities	Sales	Profit for the year
Korea Expressway Corporation	Korea	Construction and management of roads	₩ 65,768,191	₩ 29,434,065	₩ 8,721,408	₩ 98,570
Korea Expressway Corporation Facility Management Co.,Ltd.	Korea	Building(facilities) and maintenance, etc.	4,203	3,511	13,672	(98)
Korea Expressway Corporation Service Co.,Ltd.	Korea	Toll road and facility usage fee	56,333	52,944	152,336	2,398

2. Summary of significant accounting policies

Basis of consolidation

The consolidated financial statements comprise the financial statements of the Group as of December 31, 2020. Control is obtained when the Group is exposed to, or has rights to, variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if, and only if, the Group has:

- Power over the investee (i.e., existing rights that give it the current ability to direct the relevant activities of the investee)
- Exposure, or rights, to variable returns from its involvement with the investee
- The ability to use its power over the investee to affect its returns

Generally, there is a presumption that a majority of voting rights results in control. When the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- The contractual arrangement(s) with the other vote holders of the investee
- Rights arising from other contractual arrangements
- The Group's voting rights and potential voting rights

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (OCI) are attributed to the owners of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to ensure conformity with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control of a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity, while any resultant gain or loss is recognized in profit or loss. Any investment retained in the former subsidiary is recognized at its fair value.

Basis of preparation

The consolidated financial statements of the Group have been prepared in accordance with Accounting Standards for Public Enterprises and Quasi-governmental Institutions in the Republic of Korea ("Government Accounting Standards") pursuant to the *Act on the Management of Public Institutions and the Decree on Accounting for Public Corporations and Quasi-governmental Institutions,* which mandates application of Korean International Accounting Standards ("K-IFRS") enacted by the *Act on External Audit of Stock Companies* where specific accounting treatments are not prescribed by Government Accounting Standards. The accompanying consolidated financial statements have been translated into English from Korean financial statements. In the event of any differences in interpreting the financial statements or the independent auditor's report thereon, Korean version, which is used for regulatory reporting purposes, shall prevail.

The Group adopted the K-IFRS from the reporting period beginning on January 1, 2011. The date of transition to K-IFRS according to K-IFRS 1101, *First-time Adoption of Korean International Financial Reporting Standards*, was January 1, 2010.

2. Summary of significant accounting policies (cont'd)

1) Application of Government Accounting Standards

- Accounting Treatment for Assets Consigned

The Group represents assets that have been entrusted for consignment and management by third parties, such as the Government, by subtracting the assets from the acquired assets.

- Remaining government subsidies and Consigned project expenses

The Group has incurred government subsidies related to its own business carried over to the next year, and is deducted from cash and cash equivalents in accordance with Article 44-2 of public corporations and quasi-governmental organizations.

- Recognition of Revenue and Expenses Related to Consignment Management

The Group recognizes funds received from the Ministry of Land, Infrastructure and Transport and others for consignment management services as revenue and expenses or assets and liabilities as the associated project progresses. The Group does not offset each account.

- Contribution to the Employee Welfare Fund

The Group contributes to the employee welfare fund under the Employee Welfare Fund Act, which is recognized as selling and administrative expenses.

The significant accounting policies used for the preparation of the current financial statements are consistent with those applied to the financial statements for the year ended December 31, 2019, except for the effect associated with the introduction of the Standards and Interpretations described below.

2) Standards issued but not yet effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

Amendments to K-IFRS 1001: Classification of Liabilities as Current or Non-current
In January 2020, the IASB issued amendments to paragraphs 69 to 76 of KIFRS 1001 to specify the requirements for classifying liabilities as current or non-current. The amendments clarify:

- What is meant by a right to defer settlement
- That a right to defer must exist at the end of the reporting period
- That classification is unaffected by the likelihood that an entity will exercise its deferral right
- That only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification

The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and must be applied retrospectively. The Group is currently assessing the impact the amendments will have on current practice and whether existing loan agreements may require renegotiation.

Property, Plant and Equipment: Proceeds before Intended Use – Amendments to K-IFRS 1016
In May 2020, the IASB issued Property, Plant and Equipment — Proceeds before Intended Use, which prohibits entities deducting from the cost of an item of property, plant and equipment, any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognizes the proceeds from selling such items, and the costs of producing those items, in profit or loss.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 and must be applied retrospectively to items of property, plant and equipment made available for use on or after the beginning of the earliest period presented when the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

2. Summary of significant accounting policies (cont'd)

Onerous Contracts – Costs of Fulfilling a Contract – Amendments to K-IFRS 1037
In May 2020, the IASB issued amendments to KIFRS 1037 to specify which costs an entity needs to include when assessing whether a contract is onerous or loss-making. The amendments apply a "directly related cost approach". The costs that relate directly to a contract to provide goods or services include both incremental costs and an allocation of costs directly related to contract activities. General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. The amendments are effective for annual reporting periods beginning on or after January 1, 2022. The Group will apply these amendments to contracts for which it has not yet fulfilled all its obligations at the beginning of the annual reporting period in which it first applies the amendments.

Annual Improvements 2018-2020 Cycle

K-IFRS 1109 Financial Instruments – Fees in the '10 per cent' test for derecognition of financial liabilities
As part of its 2018-2020 annual improvements to KIFRS standards process the IASB issued amendment to KIFRS 1109. The amendment clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. An entity applies the amendment to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment.
The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. The Group will apply the amendments to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

3) New and amended standards and interpretations

The Group applied for the first-time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2020. The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

Amendments to KIFRS 1103: Definition of a Business
The amendment to KIFRS 1103 Business Combinations clarifies that to be considered a business, an integrated 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 output. Furthermore, it clarifies that a business can exist without including all of the inputs and processes needed to create outputs. These amendments had no impact on the consolidated financial statements of the Group, but may impact future periods should the Group enter into any business combinations.

Amendments to KIFRS 1107, KIFRS 1109 and KIFRS 1039 Interest Rate Benchmark Reform
The amendments to KIFRS 1109 and KIFRS 1039 Financial Instruments: Recognition and Measurement provide a number of reliefs, which apply to all hedging relationships that are directly affected by interest rate benchmark reform. A hedging relationship is affected if the reform gives rise to uncertainty about the timing and/or amount of benchmark-based cash flows of the hedged item or the hedging instrument. These amendments have no impact on the consolidated financial statements of the Group as it does not have any interest rate hedge relationships.

Amendments to KIFRS 1001 and KIFRS 1008 Definition of Material
The amendments provide a new definition of material that states, "information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity." The amendments clarify that materiality will depend on the nature or magnitude of information, either individually or in combination with other information, in the context of the financial statements. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users. These amendments had no impact on the consolidated financial statements of, nor is there expected to be any future impact to the Group.

2. Summary of significant accounting policies (cont'd)

Conceptual Framework for Financial Reporting (issued on March 29, 2018)

The Conceptual Framework is not a standard, and none of the concepts contained therein override the concepts or requirements in any standard. The purpose of the Conceptual Framework is to assist the KASB in developing standards, to help preparers develop consistent accounting policies where there is no applicable standard in place and to assist all parties to understand and interpret the standards. This will affect those entities which developed their accounting policies based on the Conceptual Framework. The revised Conceptual Framework includes some new concepts, updated definitions and recognition criteria for assets and liabilities and clarifies some important concepts. These amendments had no impact on the consolidated financial statements of the Group.

Amendments to KIFRS 1116 Covid-19 Related Rent Concessions

On 28 May 2020, the IASB issued Covid-19-Related Rent Concessions - amendment to KIFRS 1116 Leases. The amendments provide relief to lessees from applying KKIFRS 11016 guidance on lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic. As a practical expedient, a lessee may elect not to assess whether a Covid-19 related rent concession from a lessor is a lease modification. A lessee that makes this election accounts for any change in lease payments resulting from the Covid-19 related rent concession the same way it would account for the change under KIFRS 1116 if the change were not a lease modification.

The amendment applies to annual reporting periods beginning on or after 1 June 2020. Earlier application is permitted. This amendment had no impact on the consolidated financial statements of the Group.

Significant accounting policies

Significant accounting policies applied to the preparation of the financial statements are as follows. Unless otherwise stated, the accounting policies have been continuously applied in the stated accounting periods.

Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in administrative expenses.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Contingent consideration classified as an asset or liability that is a financial instrument is measured at fair value with the changes in fair value recognized in profit or loss or other comprehensive income in accordance with K-IFRS 1109. Contingent consideration classified as equity is not remeasured, and its subsequent settlement is accounted for within equity. Other contingent consideration that is not within the scope of K-IFRS 1109 is measured at fair value at each reporting date with changes in fair value recognized in accordance with the appropriate accounting standards.

2. Summary of significant accounting policies (cont'd)

***Business combinations and goodwill* (cont'd)**

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a cash-generating unit (CGU) and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the CGU retained.

Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The considerations made in determining significant influence or joint control are similar to those necessary to determine control over subsidiaries. The Group's investments in its associate and joint venture are accounted for using the equity method.

Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the associate or joint venture since the acquisition date. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is not tested for impairment separately.

The statement of profit or loss and other comprehensive income reflects the Group's share of the results of operations of the associate or joint venture. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognized directly in the equity of the associate or joint venture, the Group recognizes its share of any changes, when applicable, in the statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the associate or joint venture are eliminated to the extent of the interest in the associate or joint venture.

The aggregate of the Group's share of profit or loss of an associate and a joint venture is shown on the face of the statement of profit or loss and other comprehensive income outside operating profit and represents profit or loss after tax and non-controlling interests in the subsidiaries of the associate or joint venture. The financial statements of the associate or joint venture are prepared for the same reporting period as the Group. When necessary, adjustments are made to bring the accounting policies in line with those of the Group.

After application of the equity method, the Group determines whether it is necessary to recognize an impairment loss on its investment in its associate or joint venture. At each reporting date, the Group determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value, and then recognizes the loss as 'Share of profit of an associate and a joint venture' in the statement of profit or loss and other comprehensive income.

2. Summary of significant accounting policies (cont'd)

Investments in associates and joint ventures(cont'd)

Upon loss of significant influence over the associate or joint control over the joint venture, the Group measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the associate or joint venture upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognized in profit or loss.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

When a Group entity undertakes its activities under joint operations, the Group as a joint operator recognizes in relation to its interest in a joint operation:

- its assets, including its share of any assets held jointly;
- its liabilities, including its share of any liabilities incurred jointly;
- its revenue from the sale of its share of the output arising from the joint operation;
- its share of the revenue from the sale of the output by the joint operation; and
- its expenses, including its share of any expenses incurred jointly.

The results of operations and assets and liabilities of joint ventures are incorporated in these financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with K-IFRS 1105.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of a joint venture recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

When the Group transacts with a joint venture of the Group, profits and losses resulting from the transactions with the joint venture are recognized in the Group's financial statements only to the extent of interests in the joint venture that are not related to the Group.

Revenue from contracts with customers

The Group operates a project to provide road installation, management, and road-related unit services. Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. The Group determined itself as the principal in contracts with customers as it controls promised goods or services in providing goods or services to the customer.

Leases

The Group assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

1) Group as a lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognizes lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

2. Summary of significant accounting policies (cont'd)

***Leases* (cont'd)**

i) Right-of-use assets

The Group recognizes right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets.

If ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

The right-of-use assets are also subject to impairment. Refer to the accounting policies in section Property, plant and equipment and intangible assets.

ii) Lease liabilities

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognized as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

The Group's lease liabilities are included in interest-bearing loans and borrowings

iii) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases of machinery and equipment (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered to be low value. Lease payments on short-term leases and leases of low value assets are recognized as expense on a straight-line basis over the lease term.

2) Group as a lessor

Leases in which the Group does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned.

2. Summary of significant accounting policies (cont'd)

Foreign currencies

The financial statements are presented in the currency of the primary economic environment in which the entity operates (its functional currency). For the purpose of the financial statements, the results of operations and financial position of each Group entity are expressed in Korean won, which is the functional currency of the Group and the presentation currency for the financial statements.

In preparing the financial statements of the entities, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are translated using the closing rate. Non-monetary items carried at fair value in foreign currencies, shall be translated using the exchange rates at the date when the fair value was measured. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are recognized in profit or loss in the period in which they arise, except for:

- exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;
- exchange differences arising from transactions to avoid specific foreign currency risk;
- exchange differences on monetary items that is receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur in the foreseeable future (therefore forming part of the net investment in the foreign operation). Such exchange differences are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

Borrowing costs

The Group capitalizes borrowing costs directly related to the acquisition, construction, or manufacturing of qualifying assets as part of the cost of such assets until the qualifying assets are used for their intended use or are available for sale.

All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

Borrowing costs consist of interest and other costs incurred by borrowing.

Government grants

Government grants shall not be recognized until there is reasonable assurance that the entity will comply with the conditions attaching to them and that the grants will be received.

The benefit of a government loan at a below-market rate of interest is treated as a government grant. The benefit of the below-market rate of interest shall be measured as the difference between the initial carrying value of the loan determined in accordance with K-IFRS 1109 and the proceeds received.

Government grants related to assets shall be presented in the statement of financial position by deducting the grant in arriving at the carrying amount of the asset. The grant is recognized in profit or loss by reducing the depreciation cost over the useful life of the related asset.

Grants related to income are recognized as revenue over a period of time on a systematic basis to match the costs intended to be compensated. A government grant that becomes receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the entity with no future related costs shall be recognized in profit or loss of the period in which it becomes receivable.

2. Summary of significant accounting policies (cont'd)

Severance and retirement benefits

In relation to the defined benefit plan, the defined benefit obligation is calculated by performing an actuarial evaluation at the end of each reporting period using the Projected Unit Credit Method by an independent actuary.

Remeasurements, comprising actuarial gains and losses, any change in the effect of the asset ceiling (if applicable) and the return on plan assets (excluding interest), are recognized in other comprehensive income during the period in which they occur and are immediately reflected in the statement of financial position. Remeasurements recognized in other comprehensive income are transferred directly to retained earnings and will not be reclassified to profit or loss.

Past service cost is recognized in profit or loss in the period of a plan amendment. Net interest is determined by multiplying the discount rate at the beginning of the period by the net defined benefit liability or asset. Defined benefit costs are composed of service cost (current service cost, past service cost and any gain or loss on settlement.), net interest expense (income) and remeasurement.

The Group presents the service cost and net interest expense (income) components in profit or loss and the remeasurement component in other comprehensive income. Curtailment gains and losses are accounted for as past service costs.

The retirement benefit obligation recognized in the statement of financial position represents the actual deficit or surplus in the Group's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

The Group shall recognize a liability for termination benefits at the earlier of the following dates:
(a) when the Group can no longer withdraw the offer of those benefits; and
(b) when the Group recognizes costs for a restructuring

Discretionary contributions made by employees or third parties reduce service cost upon payment of these contributions to the plan. When the formal terms of the plans specify that there will be contributions from employees or third parties, the accounting depends on whether the contributions are linked to service, as follows:

If the contributions are not linked to services (e.g., contributions are required to reduce a deficit arising from losses on plan assets or from actuarial losses), they are reflected in the remeasurement of the net defined benefit liability (asset).

If contributions are linked to services, they reduce service costs. For the amount of contribution that is dependent on the number of years of service, the entity reduces service cost by attributing the contributions to periods of service using the attribution method required by K-IFRS 1019 paragraph 70 for the gross benefits. For the amount of contribution that is independent of the number of years of service, the entity reduces service cost in the period in which the related service is rendered in accordance with K-IFRS 1019 paragraph 70.

Income taxes

Income tax expense consists of current tax and deferred tax.

1) Current tax

Current tax is calculated based on taxable income for the current period. Taxable profit differs from profit before income tax in the statement of comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. Current tax liabilities shall be measured using the tax rates that have been enacted or substantively enacted by the end of the reporting period.

2. Summary of significant accounting policies (cont'd)

***Income taxes* (cont'd)**

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent it is probable that there will be sufficient taxable profits against which the benefits of the temporary differences can be utilized and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset if, and only if, the Group has a legally enforceable right to set off current tax assets against current tax liabilities and the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities that intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

For the purpose of measuring deferred tax liabilities and deferred tax assets for investment properties that are measured using the fair value model, the carrying amounts of such properties are presumed to be recovered entirely through sale, unless the presumption is rebutted; the presumption is rebutted when the investment property is depreciable and is held within a business model whose objective is to consume substantially all of the economic benefits embodied in the investment properties over time, rather than through sale.

3) Current and deferred taxes for the year

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

Property, plant and equipment

Property, plant and equipment are initially measured at cost and, after initial recognition, are carried at cost, less accumulated depreciation and accumulated impairment losses. The cost of property, plant and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

2. Summary of significant accounting policies (cont'd)

***Property and equipment* (cont'd)**

Subsequent to initial recognition, an item of property, plant and equipment shall be carried at its cost, less any accumulated depreciation and any accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of property, plant and equipment at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

The Group does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful lives of the assets shown below:

	Estimated useful lives (years)
Buildings	8–30
Structures	8–30
Machineries	4–10
Information technology equipment	4–10
Vehicles	4–6
Others	4–8

If each part of an item of property, plant and equipment has a cost that is significant in relation to the total cost of the item, it is depreciated separately.

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting date and adjusted, if appropriate. The change is accounted for as a change in an accounting estimate.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized.

Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation (including property under construction for such purposes). Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are reported at cost less accumulated depreciation and accumulated impairment losses.

Subsequent costs are recognized in carrying amount of an asset or as a separate asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

While land is not depreciated, all other investment property is depreciated based on the respective assets' estimated useful lives of 8–30 years using the straight-line method.

Depreciation methods, residual values and useful lives of investment property are reviewed at the end of each reporting period, and if it is deemed appropriate to change them, they are accounted for as changes in accounting estimates.

An investment property is derecognized upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from its disposal. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized.

2. Summary of significant accounting policies (cont'd)

Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at cost, less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period, and if it is deemed appropriate to change them, they are accounted for as changes in accounting estimates. Intangible assets with indefinite useful lives that are acquired separately are carried at cost less accumulated impairment losses.

Amortization expense is computed on the estimated useful lives of the assets shown below:

	Estimated useful lives (years)	Amortization
Industrial property rights	5–50	Straight-line method
Software	4–5	Straight-line method
Development costs	5	Straight-line method
Expressway operating rights	-	Investment cost recovery method

2) Internally generated intangible assets - research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

Expenditure arising from development (or from the development phase of an internal project) is recognized as an intangible asset if, and only if, the development project is designed to produce new or substantially improved products, and the Group can demonstrate the technical and economic feasibility and measure reliably the resources attributable to the intangible asset during its development.

The amount initially recognized for internally generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria. Where no internally generated intangible asset can be recognized, development expenditure is recognized in profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally generated intangible assets are reported at cost, less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

3) Intangible assets acquired in a business combination

Intangible assets that are acquired in a business combination are recognized separately from goodwill and are initially recognized at their fair value at the acquisition date (which is regarded as their cost). Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

4) Derecognition of intangible assets

An intangible asset is derecognized on disposal or when no future economic benefits are expected from its use. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in profit or loss when the asset is derecognized.

2. Summary of significant accounting policies (cont'd)

Impairment of property, plant and equipment and intangible assets other than goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its property, plant and equipment and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value less costs to sell or value in use. If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount and the reduced amount is recognized in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or the cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

Inventories

Inventories are stated at the lower of cost or net realizable value. Cost of inventories, except for those in transit, are measured under the weighted-average method and consists of the purchase price, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realizable value represents the estimated selling price for inventories, less all estimated costs of completion and costs necessary to make the sale.

When inventories are sold, the carrying amount of those inventories is recognized as an expense (cost of sales) in the period in which the related revenue is recognized. The amount of any write-down of inventories to net realizable value and all losses of inventories is recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, is recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

Provisions

A provision shall be recognized when:
(a) an entity has a present obligation (legal or constructive) as a result of a past event;
(b) it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and
(c) a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material). The discount rate used is a pretax rate that reflects current market assessments of the time value of money and the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage is recognized in profit or loss as finance costs.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

2. Summary of significant accounting policies (cont'd)

***Provisions* (cont'd)**

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

Financial instruments – initial recognition and subsequent measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

1) Financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortized cost, fair value through other comprehensive income (OCI), and fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under K-IFRS 1115.

In order for a financial asset to be classified and measured at amortized cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:
- Financial assets at amortized cost (debt instruments)
- Financial assets at fair value through OCI with recycling of cumulative gains and losses (debt instruments)
- Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments)
- Financial assets at fair value through profit or loss

Financial assets at amortized cost (debt instruments)
The Group measures financial assets at amortized cost if both of the following conditions are met:
- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows, and
- The contractual 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

Financial assets at amortized cost are subsequently measured using the effective interest rate (EIR) method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, modified or impaired.

2. Summary of significant accounting policies (cont'd)

Financial instruments – initial recognition and subsequent measurement **(cont'd)**

Financial assets at fair value through OCI (debt instruments)
The Group measures debt instruments at fair value through OCI if both of the following conditions are met:
- The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling, and
- The contractual 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

For debt instruments at fair value through OCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the statement of profit or loss and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss.

The Group's debt instruments at fair value through OCI is included in debt instruments classified as non-current assets.

Financial assets designated at fair value through OCI (equity instruments)
Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under K-IFRS 1032 *Financial Instruments*: *Presentation* and are not held for trading. The classification is determined on an instrument-by-instrument basis.

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the statement of profit or loss when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at fair value through OCI are not subject to impairment assessment.

The Group can elect to classify irrevocably its non-listed equity investments under this category.

Financial assets at fair value through profit or loss
Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at fair value through profit or loss, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortized cost or at fair value through OCI, as described above, debt instruments may be designated at fair value through profit or loss on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with net changes in fair value recognized in profit or loss.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if:
(a) the economic characteristics and risks are not closely related to the host;
(b) a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
(c) the hybrid contract is not measured at fair value through profit or loss.

Embedded derivatives are measured at fair value with changes in fair value recognized in profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss category.

2. Summary of significant accounting policies (cont'd)

***Financial instruments – initial recognition and subsequent measurement* (cont'd)**

Financial assets at fair value through profit or loss(cont'd)

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e., removed from the Group's consolidated statement of financial position) when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Group continues to recognize the transferred asset to the extent of its continuing involvement. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

2) Impairment of financial assets

Further disclosures relating to impairment of financial assets are also provided in the following notes:

- Disclosures for significant assumptions
- Debt instruments at fair value through OCI
- Trade receivables, including contract assets

The Group recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

2. Summary of significant accounting policies (cont'd)

Derecognition (cont'd)

For debt instruments at fair value through OCI, the Group applies the low credit risk simplification. At every reporting date, the Group evaluates whether the debt instrument is considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the internal credit rating of the debt instrument. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

The Group's debt instruments at fair value through OCI comprise solely of quoted bonds that are graded in the top investment category and, therefore, are considered to be low credit risk investments. It is the Group's policy to measure ECLs on such instruments on a 12-month basis. However, when there has been a significant increase in credit risk since origination, the allowance will be based on the lifetime ECL. The Group uses the ratings from a credit rating agency both to determine whether the debt instrument has significantly increased in credit risk and to estimate ECLs.

The Group considers a financial asset in default when contractual payments are 1 year past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

3) Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, and derivative liabilities.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss
Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss.

Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by K-IFRS 1109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments. Gains or losses on liabilities held for trading are recognized in profit or loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in K-IFRS 1109 are satisfied. The Group has not designated any financial liability as of fair value through profit or loss.

2. Summary of significant accounting policies (cont'd)

Loans and borrowings
After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR.

This category generally applies to interest-bearing loans and borrowings. For more information, refer to note on borrowings and bonds.

Derecognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit or loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the consolidated statement of financial position if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

Derivative financial instruments

Initial recognition and subsequent measurement
Derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Changes of derivative's fair value are directly recognized in profit or loss.

3. Significant accounting judgments, estimates and assumptions

In the preparation of the Group's financial statements, management is required to apply accounting policies and make judgements, estimation and assumptions affecting the carrying amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. The management's significant judgements about the application of the Group's accounting policies and the main resources of the uncertainty are as follows:

(1) Fair value of financial instruments

The Group uses valuation techniques that include inputs that are not based on observable market data to estimate the fair value of certain type of financial instruments. The Group believes that the chosen valuation techniques and assumptions used are appropriate in determining the fair value of financial instruments.

(2) Provisions

As described in Note 21, the Group recognized the provisions for litigation and others. These provisions are determined by estimation according to past experiences. Meanwhile, the Group provides performance awards according to management performance that is evaluated by Ministry of Strategy and Finance. As described in Note 21, these performance awards are recognized as provisions for employee benefits.

3. Significant accounting judgments, estimates and assumptions (cont'd)

(3) Defined benefit obligation

The Group's defined benefit obligation is determined based on the actuarial valuation carried out at the end of each annual reporting period. Actuarial assumptions are the Group's best estimates of the variables in determining the cost of providing post-employment benefits, such as discount rates, rates of expected future salary increases and mortality rates. Significant estimation uncertainty is likely to persist in making such assumptions due to the long-term nature of post-employment benefit plan. Additional items are described in Note 20.

(4) Income taxes

The Group recognized the current taxes and deferred taxes through the best estimation of expected tax effect that is expected in future as a result of business activities during the year ended December 31, 2020. However, the final taxation may differ with the estimation; this difference may influence current tax and deferred tax assets and liabilities where the final tax effect is decided.

4. Segment information

The Group is organized into four different strategic operating segments. Each operating segment separately provides products and services, and the Group manages each operating segment individually as technological and marketing strategies applied to each operating segment are different. The Chief Operating Decision Maker reviews the internal reporting data for each strategic business at least quarterly.

Operating segments of the Group are as follows:

Operating segments	Description	Customers
Toll business	Highway	Highway user
Incidental business	Expressway rest stop, oil station lease and research service	Expressway rest stop operator, etc.
Supporting business	Consignment management service	Government, etc.
Construction business	Road construction	Government

The table below provides information for each segment for the years ended December 31, 2020 and 2019 (Korean won in millions):

	2020		
	Total sales	Sales from external customers	Operating profit
Toll business	₩ 3,963,575	₩ 3,963,575	₩ 566,602
Incidental business	662,011	662,011	56,357
Supporting business	323,755	323,755	-
Construction business	4,608,162	4,608,162	-
	₩ 9,557,503	₩ 9,557,503	₩ 622,959

	2019		
	Total sales	Sales from external customers	Operating profit
Toll business	₩ 4,121,780	₩ 4,121,780	₩ 1,098,133
Incidental business	688,029	688,029	140,605
Supporting business	173,113	173,113	-
Construction business	3,738,960	3,738,960	-
	₩ 8,721,882	₩ 8,721,882	₩ 1,238,738

All of the Group's revenues are generated in Korea.

4. Segment information(cont'd)

The Government is a major customer of the Group's supporting business and construction business with revenue amounting to ₩4,931,917 million and ₩3,912,073 million for the years ended December 31, 2020 and 2019, respectively. No other major customer exceeds 10% of the Group's sales.

5. Cash and cash equivalents

Cash and cash equivalents of the consolidated statements of cash flows include cash and bank deposit, net of bank overdrafts. Cash and cash equivalents as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Cash	₩ 620,397	₩ 606,852
Cash equivalents	236,200	443,300
	856,597	1,050,152
Less: government grants for consignment management service	(348,317)	(312,738)
	₩ 508,280	₩ 737,414

6. Short-term financial assets

Details of short-term financial assets as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Short-term financial assets	₩ 45,000	₩ 30,000

7. Derivatives

Details of derivative instruments as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		December 31, 2019	
	Current	Non-current	Current	Non-current
Financial assets at FVTPL:				
Interest rate swap	₩ -	₩ 9,811	₩ -	₩ 3,920
	₩ -	₩ 9,811	₩ -	₩ 3,920
Derivative instruments assets:				
Currency swap	₩ 5,058	₩ 36,929	₩ 4,433	₩ 39,292
Interest rate swap	-	10,248	-	12,085
	₩ 5,058	₩ 47,177	₩ 4,433	₩ 51,377
Financial liabilities at FVTPL:				
Non-derivative financial liabilities (*)	₩ -	₩ 108,238	₩ -	₩ 111,326
Interest rate swap	-	5,589	-	11,321
	₩ -	₩ 113,827	₩ -	₩ 122,647
Derivative instruments liabilities:				
Currency swap	₩ 7,851	₩ 78,862	₩ -	₩ 26,498
Interest rate swap	1,855	28,098	2,331	44,477
	₩ 9,706	₩ 106,960	₩ 2,331	₩ 70,975

7. Derivatives (cont'd)

(*) The Group has entered into an interest rate swap contract to hedge risk of fair value fluctuations of bonds due to changes in interest rates. The Group may eliminate or reduce an accounting mismatch arising from classification of corporate bonds and derivative instruments at amortized cost and fair value, respectively, through designating corporate bonds as financial liabilities at fair value through profit or loss.

Details of currency swaps as of December 31, 2020 are as follows (In millions of Korean won, EUR, USD, HKD, CHF, CNY, CNH, SEK, CAD and AUD):

			Contract amount			Contract interest rate		
	Bank	Contract period	Selling amount		Buying amount	Sell	Buy	Contract exchange rate
Cash flow hedge	Woori Bank	2012.03.02–2022.03.02	HKD	452	₩ 65,856	4.00%	3.96%	145.70
Cash flow hedge	Deutsche Bank Group	2012.05.07–2024.05.07	EUR	45	67,733	3.88%	3.98%	1,505.17
Cash flow hedge	Deutsche Bank Group	2012.05.07–2027.05.07	EUR	23	34,619	4.00%	4.06%	1,505.17
Cash flow hedge	NH Investment & Securities Co., Ltd.	2015.03.18–2027.03.18	USD	50	56,150	3.02%	2.42%	1,123.00
Cash flow hedge	Korea EXIM Bank	2015.11.30–2030.11.30	USD	50	58,000	3.21%	2.41%	1,160.00
Cash flow hedge	Nomura Securities Co.	2015.12.08–2026.06.08	USD	100	115,000	3.10%	2.33%	1,150.00
Cash flow hedge	Nomura Securities Co.	2016.04.26–2026.10.26	USD	200	232,000	2.70%	1.84%	1,160.00
Cash flow hedge	Korea EXIM Bank	2016.07.05–2031.07.05	USD	100	116,000	2.57%	1.71%	1,160.00
Cash flow hedge	Nomura Securities Co.	2017.04.28–2032.04.28	SEK	720	92,304	2.31%	2.32%	128.20
Cash flow hedge	Korea EXIM Bank.	2017.05.11–2032.05.11	CAD	135	112,725	3.03%	2.32%	835.00
Cash flow hedge	Korea Development Bank	2017.06.07–2024.06.07	CHF	100	112,200	0.25%	2.24%	1,122.00
Cash flow hedge	IBK Bank	2017.06.07–2024.06.07	CHF	50	56,100	0.25%	2.24%	1,122.00
Cash flow hedge	Korea Development Bank.	2017.06.07–2024.06.07	CHF	80	89,760	0.25%	2.24%	1,122.00
Cash flow hedge	Nomura Securities Co	2018.03.05–2023.03.05	HKD	800	110,320	3.02%	2.45%	137.90
Cash flow hedge	Societe Generale	2018.03.28–2021.03.28	CNH	1,300	219,570	4.73%	2.12%	168.90
Cash flow hedge	Kookmin Bank	2018.10.22–2021.10.22	USD	200	226,860	3.63%	1.73%	1,134.30
Cash flow hedge	Korea EXIM Bank	2018.10.22–2021.10.22	USD	100	113,430	3.63%	1.73%	1,134.30
Cash flow hedge	Korea Development Bank	2019.07.25–2022.07.25	USD	150	177,150	3m LIBOR+0.64%	1.07%	1,181.00
Cash flow hedge	Korea Development Bank	2019.11.25–2022.11.25	USD	70	81,410	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Hana Bank.	2019.11.25–2022.11.25	USD	100	116,300	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Kookmin Bank	2019.11.25–2022.11.25	USD	100	116,300	3m LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Woori Bank	2020.06.02–2025.06.02	USD	100	123,000	3m LIBOR+1.20%	1.07%	1,230.00
Cash flow hedge	Korea Development Bank	2020.09.02–2023.09.02	AUD	125	106,813	0.93%	0.51%	854.50
Cash flow hedge	Hana Bank.	2020.09.02–2023.09.02	AUD	100	85,450	0.93%	0.51%	854.50
Cash flow hedge	Kookmin Bank	2020.09.02–2023.09.02	AUD	225	192,263	BBSW+0.72%	0.52%	854.50

7. Derivatives (cont'd)

Details of currency swaps as of December 31, 2019 are as follows (In millions of Korean won, EUR, USD, JPY, HKD, CHF, CNY, CNH, SEK, CAD and AUD):

			Contract amount			Contract interest rate		
	Bank	Contract period	Selling amount		Buying amount	Sell	Buy	Contract exchange rate
Cash flow hedge	Woori Bank	2012.03.02–2022.03.02	HKD	452	₩ 65,856	4.00%	3.96%	145.70
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Cash flow hedge	Nomura Securities Co.	2016.04.26–2026.10.26	USD	200	232,000	2.70%	1.84%	1,160.00
Cash flow hedge	Korea EXIM Bank	2016.07.05–2031.07.05	USD	100	116,000	2.57%	1.71%	1,160.00
Cash flow hedge	Hana Bank	2017.04.20–2020.04.20	USD	150	172,350	3M LIBOR+0.70%	1.77%	1,149.00
Cash flow hedge	Korea EXIM Bank	2017.04.20–2020.04.20	USD	150	172,350	3M LIBOR+0.70%	1.77%	1,149.00
Cash flow hedge	Kookmin Bank	2017.04.20–2020.04.20	USD	100	114,900	3M LIBOR+0.70%	1.77%	1,149.00
Cash flow hedge	Nomura Securities Co.	2017.04.28–2032.04.28	SEK	720	92,304	2.31%	2.32%	128.20
Cash flow hedge	Korea EXIM Bank.	2017.05.11–2032.05.11	CAD	135	112,725	3.03%	2.32%	835.00
Cash flow hedge	Korea Development Bank	2017.06.07–2024.06.07	CHF	100	112,200	0.25%	2.24%	1,122.00
Cash flow hedge	IBK Bank	2017.06.07–2024.06.07	CHF	50	56,100	0.25%	2.24%	1,122.00
Cash flow hedge	Korea Development Bank.	2017.06.07–2024.06.07	CHF	80	89,760	0.25%	2.24%	1,122.00
Cash flow hedge	Nomura Securities Co	2018.03.05–2023.03.05	HKD	800	110,320	3.02%	2.45%	137.90
Cash flow hedge	Societe Generale	2018.03.28–2021.03.28	CNH	1,300	219,570	4.73%	2.12%	168.90
Cash flow hedge	Kookmin Bank	2018.10.22–2021.10.22	USD	200	226,860	3.63%	1.73%	1,134.30
Cash flow hedge	Korea EXIM Bank	2018.10.22–2021.10.22	USD	100	113,430	3.63%	1.73%	1,134.30
Cash flow hedge	Korea Development Bank	2019.07.25–2022.07.25	USD	150	177,150	3M LIBOR+0.64%	1.07%	1,181.00
Cash flow hedge	Korea Development Bank	2019.07.25–2022.11.25	USD	70	81,410	3M LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Hana Bank.	2019.07.25–2022.11.25	USD	100	116,300	3M LIBOR+0.60%	1.21%	1,163.00
Cash flow hedge	Kookmin Bank	2019.07.25–2022.11.25	USD	100	116,300	3M LIBOR+0.60%	1.21%	1,163.00

7. Derivatives (cont'd)

Details of interest rate swaps as of December 31, 2020 are as follows (Korean won in millions):

	Bank	Contract period	Notional amount	Sell	Buy
Fair value hedge	Nonghyup bank	2007.07.27–2022.07.27	100,000	5.60%	CD91+0.08%
Cash flow hedge	Nomura Securities Co.	2010.11.29–2020.11.29	100,000	32X [12-month average value of absolute value (5-year CMS market price - closing price)] 0.00% (minimum), 8.50% (maximum)	4.31%
Cash flow hedge	Morgan Stanley	2010.12.10–2020.12.10	40,000	30× change 1.50% (minimum), 8.50% (maximum)	4.28%
Cash flow hedge	Societe Generale	2010.12.10–2020.12.10	40,000	30× change 1.50% (minimum), 8.50% (maximum)	4.28%
Cash flow hedge	Deutsche Bank Group	2012.09.20–2022.09.20	100,000	One year: 4.00%, 2–10 years: 2.24% + 0.10 × (70%-Average SIFMA/Average USD 3M LIBOR) minimum 0%, maximum 6%	2.97%
Cash flow hedge	Nomura Securities Co.	2013.12.09–2023.12.09	30,000	4.35%× n/N, 30/360 n: KRW CMS10 rate<6% & USD CMS10 <6% N:365	3.81%
Cash flow hedge	Nomura Securities Co.	2014.04.04–2024.04.04	30,000	1 year-2 years: 4.25%, 30/630 3-10 years: 3%, 30/360 reference average spread for specified periods 0.00% (minimum), 5.50% (maximum) Spread Reference daily spread calculation: 20Y EUR Swap interest rate 0% (minimum), 6% (maximum)	3.56%
Cash flow hedge	Morgan Stanley	2014.09.04–2024.09.04	100,000	1) Before switch options are exercised. One year: 4.00%, 2Y-10Y: Annual Min (4.20%, 3.00x(average spread (20 EUR CMS – 2 EUR CMS))xN/M), (minimum 0.00%) 2) After switch options are exercised. Annual 3.65% (Fixed rate) - Two year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	3.08%
Cash flow hedge	Deutsche Bank Group	2015.05.15–2030.05.15	30,000	One year: 4.50% 2Y-:8.0% - 0.1 x (average SIFMA/average 3M LIBOR) (Cap 5.50%, Floor 0.01%) or 5% fixed rate (Swap bank switch option)	2.69%
Cash flow hedge	Nomura Securities Co.	2015.08.19–2030.08.19	50,000	1) Before switch options are exercised One year: 3.80% 2Y-15Y: 2.11x (USD 30Y CMS -USD 2Y CMS)+0.2% (Cap 5.50%, Floor 0.00%) Or 2.8% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 2.8% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.46%
Cash flow hedge	Nomura Securities Co.	2015.09.23–2030.09.23	50,000	1) Before switch options are exercised. One year: 4.00 4.0%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.25%) or 3.0% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 3.0% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.28%
Cash flow hedge	Nomura Securities Co.	2015.10.28–2030.10.28	50,000	One year: 3.90% 3.3%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.00%) or 2.8% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 3.0% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.18%

7. Derivatives (cont'd)

Details of interest rate swaps as of December 31, 2020 are as follows (Korean won in millions):

	Bank	Contract period	Notional amount	Sell	Buy
Cash flow hedge	NH Investment & Securities Co., Ltd.	2016.06.23–2031.06.23	30,000	One year: 2.80%, 2.3%*(EUR 30Y CMS - EUR 5Y CMS) (Cap 3.00%, Floor 0.00%)	1.60%
Cash flow hedge	Hana Bank	2016.08.09–2021.08.09	100,000	CD91+0.08%	1.34%
Cash flow hedge	Hana Bank	2016.12.08–2021.12.08	200,000	CD91+0.36%	2.07%
Cash flow hedge	Hana Bank	2017.03.22–2022.03.22	200,000	CD91+0.22%	2.00%
Cash flow hedge	Hana Bank	2018.02.26–2023.02.24	150,000	CD91+0.34%	2.68%
Cash flow hedge	Hana Bank	2018.03.21–2023.03.21	150,000	CD91+0.34%	2.65%
Cash flow hedge	Hana Bank	2018.11.08–2023.11.08	100,000	CD91+0.16%	2.20%
Cash flow hedge	Hana Bank	2020.06.25–2025.06.24	100,000	CD91+0.34%	1.24%
Trading	JP Morgan Chase & Co.	2009.05.21–2022.07.27	50,000	CD91+0.08%	4.08%
Trading	Deutsche Bank Group	2009.05.21–2022.07.27	50,000	CD91+0.08%	4.08%
Trading	Societe Generale	2015.07.30–2022.10.30	70,000	5.82%	4.92%+7.85% ×(1-n/N) (n: days of USD CMS 10Y-2Y rate difference ≥0, N: days of interest)
Trading	Societe Generale	2015.12.17–2024.03.17	90,000	5.38%	4.48%+7.76% ×(1-n/N) (n: days of USD CMS 10Y-2Y rate difference ≥0, N: days for interest)
Trading	Nomura Securities Co.	2017.01.11–2022.04.11	100,000	5.30%	4.6%+ [a%×(1-n/N)] n: [KRW CMS 10y - USD CMS 10y ≥ -1.25%
Trading	Societe Generale	2016.12.08–2025.03.08	100,000	5.24%	4.54%+a% ×(1-n/N) n: [USDCMS30y -USDCMS2y≥ 0.00%
Trading	IBK Bank	2018.12.29–2038.11.29	50,000	2.40%	1Y~10Y: 2.134% 11Y~20Y: CD91+0.15%

7. Derivatives (cont'd)

Details of interest rate swaps as of December 31, 2019 are as follows (Korean won in millions):

	Bank	Contract period	Notional amount	Sell	Buy
Fair value hedge	Nonghyup bank	2007.07.27–2022.07.27	100,000	5.60%	CD91+0.08%
Cash flow hedge	Nomura Securities Co.	2010.11.29–2020.11.29	100,000	32X [12-month average value of absolute value (5-year CMS market price - closing price)] 0.00% (minimum), 8.50% (maximum)	4.31%
Cash flow hedge	Morgan Stanley	2010.12.10–2020.12.10	40,000	30× change 1.50% (minimum), 8.50% (maximum)	4.28%
Cash flow hedge	Societe Generale	2010.12.10–2020.12.10	40,000	30× change 1.50% (minimum), 8.50% (maximum)	4.28%
Cash flow hedge	Deutsche Bank Group	2012.09.20–2022.09.20	100,000	One year: 4.00%, 2–10 years: 2.24% + 0.10 × (70%-Average SIFMA/Average USD 3M LIBOR) minimum 0%, maximum 6%	2.97%
Cash flow hedge	Nomura Securities Co.	2013.12.09–2023.12.09	30,000	4.35%× n/N, 30/360 n: KRW CMS10 rate<6% & USD CMS10 <6% N:365	3.81%
Cash flow hedge	Nomura Securities Co.	2014.04.04–2024.04.04	30,000	1 year-2 years: 4.25%, 30/630 3-10 years: 3%, 30/360 reference average spread for specified periods 0.00% (minimum), 5.50% (maximum) Spread Reference daily spread calculation: 20Y EUR Swap interest rate 0% (minimum), 6% (maximum)	3.56%
Cash flow hedge	Morgan Stanley	2014.09.04–2024.09.04	100,000	1) Before switch options are exercised. One year: 4.00%, 2Y-10Y: Annual Min (4.20%, 3.00x(average spread (20 EUR CMS – 2 EUR CMS))xN/M), (minimum 0.00%) 2) After switch options are exercised. Annual 3.65% (Fixed rate) - Two year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	3.08%
Cash flow hedge	Deutsche Bank Group	2015.05.15–2030.05.15	30,000	One year: 4.50% 2Y-:8.0% - 0.1 x (average SIFMA/average 3M LIBOR) (Cap 5.50%, Floor 0.01%) or 5% fixed rate (Swap bank switch option)	2.69%
Cash flow hedge	Nomura Securities Co.	2015.08.19–2030.08.19	50,000	1) Before switch options are exercised One year: 3.80% 2Y-15Y: 2.11x (USD 30Y CMS -USD 2Y CMS)+0.2% (Cap 5.50%, Floor 0.00%) Or 2.8% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 2.8% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.46%
Cash flow hedge	Nomura Securities Co.	2015.09.23–2030.09.23	50,000	1) Before switch options are exercised. One year: 4.00% 4.0%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.25%) or 3.0% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 3.0% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.28%
Cash flow hedge	Nomura Securities Co.	2015.10.28–2030.10.28	50,000	One year: 3.90% 3.3%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.00%) or 2.8% fixed rate (Swap bank switch option) 2) After switch options are exercised. Annual 3.0% (Fixed rate) – One year after the date of issue, it is possible to exercise switch options annually to the issuer – before exercising switch options, the written notice has to be submitted to Korea Securities Depository	2.18%

7. Derivatives (cont'd)

Details of interest rate swaps as of December 31, 2019 are as follows (Korean won in millions):

	Bank	Contract period	Notional amount	Sell	Buy
Cash flow hedge	NH Investment & Securities Co., Ltd.	2016.06.23–2031.06.23	30,000	One year: 2.80%, 2.3%*(EUR 30Y CMS - EUR 5Y CMS) (Cap 3.00%, Floor 0.00%)	1.60%
Cash flow hedge	Hana Bank	2016.08.09–2021.08.09	100,000	CD91+0.08%	1.34%
Cash flow hedge	Hana Bank	2016.12.08–2021.12.08	200,000	CD91+0.36%	2.07%
Cash flow hedge	Hana Bank	2017.03.22–2022.03.22	200,000	CD91+0.22%	2.00%
Cash flow hedge	Hana Bank	2018.02.26–2023.02.24	150,000	CD91+0.34%	2.68%
Cash flow hedge	Hana Bank	2018.03.21–2023.03.21	150,000	CD91+0.34%	2.65%
Cash flow hedge	Hana Bank	2018.11.08–2023.11.08	100,000	CD91+0.16%	2.20%
Trading	JP Morgan Chase & Co.	2009.05.21–2022.07.27	50,000	CD91+0.08%	4.08%
Trading	Deutsche Bank Group	2009.05.21–2022.07.27	50,000	CD91+0.08%	4.08%
Trading	Societe Generale	2015.07.30–2022.10.30	70,000	5.82%	4.92%+7.85% ×(1-n/N) (n: days of USD CMS 10Y-2Y rate difference ≥0, N: days of interest)
Trading	Societe Generale	2015.12.17–2024.03.17	90,000	5.38%	4.48%+7.76% ×(1-n/N) (n: days of USD CMS 10Y-2Y rate difference ≥0, N: days for interest)
Trading	Nomura Securities Co.	2017.01.11–2022.04.11	100,000	5.30%	4.6%+［a%×(1-n/N)］ n:［KRW CMS 10y - USD CMS 10y ≥ -1.25%
Trading	Societe Generale	2016.12.08–2025.03.08	100,000	5.24%	4.54%+a% ×(1-n/N) n:［USDCMS30y-USDCMS2y ≥0.00%
Trading	IBK Bank	2018.12.29–2038.11.29	50,000	2.40%	1Y~10Y: 2.134% 11Y~20Y: CD91+0.15%

7. Derivatives (cont'd)

Derivatives transaction gain (loss) for the years ended December 31, 2020 and 2019, are as follows (Korean won in millions):

	Gain (loss) on valuation		Gain (loss) on transaction		Accumulated comprehensive income (loss)	
	2020	2019	2020	2019	2020	2019
Hedge accounting applied:						
Currency swap	₩ (102,621)	₩ 77,305	₩ (3,520)	₩ 12,359	₩ 45,100	₩ 34,781
Interest rate swap	(3,088)	(2,272)	-	-	18,107	(8,364)
	₩ (105,709)	₩ 75,032	₩ (3,520)	₩ 12,359	₩ 63,207	₩ 26,416

Derivatives transaction gain (loss) for the years ended December 31, 2020 and 2019, are as follows (Korean won in millions):

	Gain (loss) on valuation		Gain (loss) on transaction		Accumulated comprehensive income (loss)	
	2020	2019	2020	2019	2020	2019
Financial instruments at FVTPL:						
Currency swap	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
Interest rate swap	11,624	17,001	12	(458)	-	-
Bonds	3,088	2,272	-	-	-	-
	₩ 14,712	₩ 19,274	₩ 12	₩ (458)	₩ -	₩ -

8. Trade and other receivables

Trade and other receivables as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020			
	Receivables	Allowance for doubtful accounts	Present value of discount	Carrying amount
Current:				
Other receivables	₩ 306,473	₩ (8,901)	₩ (187)	₩ 297,385
Non-current:				
Other receivables	109,916	-	(682)	109,234
	₩ 416,389	₩ (8,901)	₩ (869)	₩ 406,619

	December 31, 2019			
	Receivables	Allowance for doubtful accounts	Present value of discount	Carrying amount
Current:				
Other receivables	₩ 242,154	₩ (7,928)	₩ (188)	₩ 234,038
Non-current:				
Other receivables	103,472	-	(709)	102,762
	₩ 345,626	₩ (7,928)	₩ (897)	₩ 336,801

8. Trade and other receivables (cont'd)

Details of other receivables as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020			
	Receivables	Allowance for doubtful accounts	Present value discount	Carrying amount
Current:				
Other accounts receivable	₩ 290,766	₩ (8,901)	₩ -	₩ 281,865
Accrued income	819	-	-	819
Short-term deposits	14,888	-	(187)	14,701
	306,473	(8,901)	(187)	297,385
Non-current:				
Long-term deposits	109,916	-	(682)	109,234
	₩ 416,389	₩ (8,901)	₩ (869)	₩ 406,619

	December 31, 2019			
	Receivables	Allowance for doubtful accounts	Present value discount	Carrying amount
Current:				
Other accounts receivable	₩ 229,970	₩ (7,928)	₩ -	₩ 222,042
Accrued revenue	375	-	-	375
Short-term deposits	11,809	-	(188)	11,621
	242,154	(7,928)	(188)	234,038
Non-current:				
Long-term deposits	103,472	-	(709)	102,762
	₩ 345,626	₩ (7,928)	₩ (897)	₩ 336,801

Credit risk and allowance for doubtful accounts

The above trade and other receivables consist of other accounts receivable, accrued revenue and deposits are measured at amortized cost.

The credit period for other accounts receivable is one month; so, the Group does not recognize an allowance for doubtful accounts for the accounts receivable that are not past due or past due, but not impaired because of the collateral. The Group's allowance for doubtful accounts is computed based on the collection rates and history of bad debts for the past five years. The Group recognizes 99% of allowance for doubtful accounts where the ageing is more than 30 months past due as these accounts receivables are not likely to be recovered based on past experience.

8. Trade and other receivables (cont'd)

Ageing analysis of other accounts receivable as of December 31, 2020 and 2019 is as follows (Korean won in millions):

	2020	2019
Neither past due nor impaired	₩ 110,778	₩ 85,277
Past due nor impaired:		
- 1 month–7 months	14,014	11,501
- 1–13 months	25,012	32,989
- 13–19 months	11,337	862
- 19–25 months	21,345	15,326
- 25–31 months	14	40
- 31–37 months	11,171	2,377
- More than 37 months	2,936	1,315
Impaired (individually assessed)	-	-
Impaired (collectively assessed):		
- 1–7 months	30,827	28,060
- 7–13 months	18,230	12,339
- 13–19 months	796	614
- 19–25 months	9,892	13,947
- 25–31 months	271	1,533
- 31–37 months	12,750	10,728
- More than 37 months	21,393	13,063
Deduction: allowance for doubtful accounts	(8,901)	(7,928)
	₩ 281,865	₩ 222,042

The above aging analysis relates to the current other accounts receivable.

The Group considers changes in credit ratings of the receivables from the beginning of the credit period to the end of the reporting period in determining the recoverability of the receivables. The concentration of credit risk is limited because the number of the customers are very large and the correlation among them is low.

Changes in allowance for doubtful accounts for trade and other receivables for the years ended December 31, 2020 and 2019, are as follows (Korean won in millions):

	2020	2019
Beginning balance	₩ 7,928	₩ 7,922
Bad debt expenses	3,284	3,738
Write-off	(2,311)	(3,733)
Ending balance	₩ 8,901	₩ 7,928

9. Financial assets at fair value

Financial assets at fair value as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Non-current financial instruments:	₩	₩
Financial assets at fair value through profit or loss (*)	42,258	45,419
Financial assets at fair value through other comprehensive income	₩ 21,601	₩ 21,803

(*) ₩9,811 million (₩3,920 million in 2019) of interest rate swap, which is a derivative component, is excluded.

9. Financial assets at fair value (cont'd)

Financial assets at fair value through profit or loss as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	Shares	Percentage of ownership	2020 Acquisition Cost	2020 Carrying Amount	2019 Acquisition Cost	2019 Carrying Amount
Seoul-Choonchun Highway	1,976,000	10.00%	₩ 9,880	14,701	₩ 9,880	24,807
The 2nd Seoul-Incheon Linking Highway Co., Ltd	1,602,230	4.76%	8,011	3,355	8,011	4,440
Seoul-north Highway	4,876,000	10.00%	24,380	4,525	24,380	6,087
Beneficiary certificates	-	-	20,154	19,677	10,117	10,085
			₩ 62,425	42,258	₩ 52,388	45,419

Financial assets at fair value through other comprehensive income as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	Shares	Percentage of ownership	2020 Acquisition Cost	2020 Acquisition Cost	2019 Acquisition Cost	2019 Carrying Amount
DREAMLINE Corporation	181,549	1.10%	₩ 44,028	946	₩ 44,028	1,153
Korea Overseas Infrastructure & Urban Development Corporation	4,154,400	6.62%	20,772	20,591	20,772	20,645
BAKAD Investment & Operation LLP	-	0.1%	64	64	5	5
			₩ 64,864	21,601	₩ 64,805	21,803

Changes in financial assets at fair value as of December 31, 2020 and 2019 are as follows (Korean won in millions):

2020	Beginning balance	Acquisition (reclassification)	Disposals	Valuation	Ending balance
Financial assets at fair value through profit or loss	₩ 45,419	₩ 10,215	₩ (58)	₩ (13,317)	₩ 42,258
Financial instruments at fair value through other comprehensive income	21,803	₩ 60	-	(262)	21,601

2019	Beginning balance	Acquisition (reclassification)	Disposals	Valuation	Ending balance
Financial assets at fair value through profit or loss	₩ 46,537	₩ 10,117	₩ -	₩ (11,235)	₩ 45,419
Financial instruments at fair value through other comprehensive income	21,468	₩ 4	-	331	21,803

10. Loans

Details of loans as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		
	Nominal value	Present value of discount	Carrying amount
Loans for tuition (*1)	₩ 3,672	₩ (279)	₩ 3,393
Loans for housing (*2)	35,240	(6,331)	28,909
Loans for rental housing	405	-	405
	₩ 39,317	₩ (6,610)	₩ 32,707

	December 31, 2019		
	Nominal value	Present value of discount	Carrying amount
Loans for tuition (*1)	₩ 4,469	₩ (380)	₩ 4,089
Loans for housing (*2)	33,635	(5,395)	28,239
Loans for rental housing	455	-	455
	₩ 38,558	₩ (5,775)	₩ 32,783

(*1) The Group provides loans to its employees, who have worked for more than a year, for the purpose of paying tuition of their children at zero interest rate. Repayment is made in four years (a total of 16 installments), with a two-year grace period after graduation.

(*2) The Group provides loans at market interest rates to employees without houses in order to stabilize their housing. The loan’s repayment period is less than twenty years, with a grace period of less than five years.

11. Inventories

Details of inventories as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		December 31, 2019	
	Acquisition cost	Carrying amounts	Acquisition cost	Carrying amounts
Merchandise	₩ 1,811	₩ 1,811	₩ 1,447	₩ 1,447
Supplies	18,246	18,246	19,214	19,214
Others	1,035	1,035	925	925
	₩ 21,092	₩ 21,092	₩ 21,587	₩ 21,587

12. Non-financial assets

Details of non-financial assets as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		December 31, 2019	
	Current	Non-current	Current	Non-current
Prepaid expenses	₩ 5,538	₩ 5,996	₩ 5,064	₩ 5,375
Greenhouse gas emission rights	285	-	420	-
Other non-financial assets	-	1,676	-	1,676
	₩ 5,823	₩ 7,672	₩ 5,484	₩ 7,051

13. Investments in associates and joint ventures

Investments in associates and joint ventures as of December 31, 2020 and 2019 are as follows (Korean won in millions, except percentage of ownership):

Company	Major business activity	Location of incorporation	December 31, 2020 Percentage of ownership	Acquisition cost	Carrying amount
Associates:					
Korea Construction Management Corp.	Building, civil engineering service	Korea	42.50%	₩ 9,822	₩ -
Expressway Solar Power Co., Ltd.	Expressway solar power projects	Korea	29.00%	1,856	3,019
Highway solar Co., Ltd	New renewable energy service	Korea	29.00%	653	855
				12,331	3,874
Joint venture:					
Busan-Ulsan Expressway Co., Ltd. (*)	Road and facility operating service	Korea	51.00%	839	-
				839	-
				₩ 13,170	₩ 3,874

(*) The Group classified the investee as a joint venture as all financial and operating policies of the investee require joint approval by the Group and the other investors.

Company	Major business activity	Location of incorporation	December 31, 2019 Percentage of ownership	Acquisition cost	Carrying amount
Associates:					
Korea Construction Management Corp.	Building, civil engineering service	Korea	42.50%	₩ 9,822	₩ 2,719
Expressway Solar Power Co., Ltd.	Expressway solar power projects	Korea	29.00%	1,856	2,825
Highway solar Co., Ltd	New renewable energy service	Korea	29.00%	653	891
				12,331	6,435
Joint venture:					
Busan-Ulsan Expressway Co., Ltd. (*)	Road and facility operating service	Korea	51.00%	839	-
				839	-
				₩ 13,170	₩ 6,435

(*) The Group classified the investee as a joint venture as all financial and operating policies of the investee require joint approval by the Group and the other investors.

13. Investments in associates and joint ventures(cont'd)

Changes in investments in associates and joint ventures for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020					
	Beginning balance	Acquisition (disposal)	Gain (loss) on valuation	Change in equity	Dividend	Ending balance
Associates:						
Korea Construction Management Corp. (*1)	₩ 2,719	₩ -	₩ (2,778)	₩ 59	₩ -	₩ -
Expressway Solar Power Co., Ltd.	2,825	-	264	(70)	-	3,019
Highway Solar Corp.	891	-	(36)	-	-	855
	6,435	-	(2,550)	(11)	-	3,874
Joint venture:						
Busan-Ulsan Expressway Co., Ltd. (*2)	-	-	-	-	-	-
	₩ 6,435	₩ -	₩ (2,550)	₩ (11)	₩ -	₩ 3,874

(*1) Korea Construction Management Corp.'s, an associate, investments balance became nil due to the cumulative loss thus the application of equity method was suspended. As of December 31, 2020, the change in equity amount of ₩139 million (share of loss amount ₩139 million) was not recognized.

(*2) The balance of investments in Busan-Ulsan Expressway Co., Ltd. amounts to nil due to the cumulative losses and the equity method was suspended. As a result, the share of losses not recognized is ₩163,853 million as of December 31, 2020. In addition, the Group's shares were provided as collateral in connection with the debts of the investee.

	2019					
	Beginning balance	Acquisition (disposal)	Gain (loss) on valuation	Change in equity	Dividend	Ending balance
Associates:						
Korea Construction Management Corp.	₩ 2,919	₩ -	₩ 185	₩ (386)	₩ -	₩ 2,719
Expressway Solar Power Co., Ltd.	2,747	-	148	(70)	-	2,825
Highway Solar Corp.	775	-	116	-	-	891
	6,442	-	449	(456)	-	6,435
Joint venture:						
Busan-Ulsan Expressway Co., Ltd. (*)	-	-	-	-	-	-
	₩ 6,442	₩ -	₩ 449	₩ (456)	₩ -	₩ 6,435

(*) The balance of investments in Busan-Ulsan Expressway Co., Ltd. amounts to nil due to the cumulative losses and the equity method was suspended. As a result, the share of losses not recognized is ₩159,379 million as of December 31, 2019. In addition, the Group's shares were provided as collateral in connection with the debts of the investee.

13. Investments in associates and joint ventures (cont'd)

Financial information of associates and joint ventures is as follows (Korean won in millions):

	December 31, 2020			
	Assets	Liabilities	Revenue	Net income (loss) for the period
Associates:				
Korea Construction Management Corp.	₩ 35,384	₩ 14,551	₩ 39,077	₩ (6,884)
Expressway Solar Power Co., Ltd.	15,262	4,852	2,855	569
Highway Solar Corp.	16,345	13,397	2,128	(13)
Joint venture:				
Busan-Ulsan Expressway Co. Ltd.	608,283	929,563	72,353	(9,940)

	December 31, 2019			
	Assets	Liabilities	Revenue	Net income (loss) for the period
Associates:				
Korea Construction Management Corp.	₩ 31,169	₩ 4,062	₩ 36,980	₩ (163)
Expressway Solar Power Co., Ltd.	17,653	7,911	2,991	510
Highway Solar Corp.	17,473	14,401	2,280	387
Joint venture:				
Busan-Ulsan Expressway Co. Ltd.	628,896	941,404	72,296	(11,657)

14. Property, plant and equipment

Property, plant and equipment as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020			
	Acquisition cost	Government grant	Accumulated depreciation	Carrying amount
Land	₩ 133,762	₩ -	₩ -	₩ 133,762
Buildings	937,374	(245)	(328,292)	608,837
Structures	102,921	(175)	(55,992)	46,754
Machinery	110,126	-	(82,930)	27,196
Information technology equipment	582,769	-	(461,036)	121,733
Vehicles	141,313	(346)	(95,364)	45,603
Furniture and fixtures	120,695	(5)	(84,199)	36,491
Tools and equipment	35,184	-	(23,754)	11,430
Right-of-use assets (vehicles)	9,897	-	(5,299)	4,598
Right-of-use assets (buildings)	3,264	-	(1,804)	1,460
Construction-in-progress	72,179	-	-	72,179
	₩ 2,249,484	₩ (771)	₩ (1,138,670)	₩ 1,110,043

14. Property, plant and equipment(cont'd)

	December 31, 2019			
	Acquisition cost	Government grant	Accumulated depreciation	Carrying amount
Land	₩ 141,262	₩ -	₩ -	₩ 141,262
Buildings	871,717	(255)	(300,984)	570,478
Structures	97,418	(191)	(53,518)	43,710
Machinery	109,061	-	(80,044)	29,016
Information technology equipment	558,231	-	(446,887)	111,344
Vehicles	133,914	(266)	(89,425)	44,224
Furniture and fixtures	106,696	(6)	(73,353)	33,337
Tools and equipment	34,860	-	(20,476)	14,384
Right-of-use assets (vehicles)	4,475	-	(2,513)	1,962
Right-of-use assets (buildings)	2,196	-	(732)	1,464
Construction-in-progress	84,179	-	-	84,179
	₩ 2,144,010	₩ (718)	₩ (1,067,932)	₩ 1,075,360

Changes in property, plant and equipment for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020				
	Beginning balance	Acquisition (*1)	Disposals	Depreciation	Others (*2)	Ending balance
Land	₩ 141,262	₩ -	₩ (4)	₩ -	₩ (7,496)	₩ 133,762
Buildings	570,733	3	(2,051)	(30,168)	70,565	609,082
(Government grant)	(255)	-	-	10	-	(245)
Structures	43,901	20	(338)	(2,936)	6,282	46,929
(Government grant)	(191)	-	-	16	-	(175)
Machinery	29,016	-	(126)	(8,493)	6,799	27,196
(Government grant)	-	-	-	-	-	-
Information technology equipment	111,344	94	(16)	(37,155)	47,466	121,733
Vehicles	44,489	-	(47)	(16,139)	17,646	45,949
(Government grant)	(266)	(160)	-	80	-	(346)
Furniture and fixtures	33,343	535	(10)	(15,002)	17,630	36,496
(Government grant)	(6)	-	-	1	-	(5)
Tools and equipment	14,384	-	-	(4,142)	1,188	11,430
Right-of-use assets	3,427	555	(133)	(4,219)	6,428	6,058
Construction-in-progress	84,179	155,809	-	-	(167,809)	72,179
	₩ 1,075,360	₩ 156,856	₩ (2,725)	₩ (118,147)	₩ (1,301)	₩ 1,110,043

(*1) Increase due to asset contributions of ₩97 million is included.

(*2) Other changes are due to recognition of right-of-use assets, reclassification of construction-in-progress and replacement of the investment property and intangible assets.

14. Property, plant and equipment (cont'd)

	2019						
	Beginning balance	Effect of changes in accounting policies	Acquisition (*1)	Disposals	Depreciation	Others (*2)	Ending balance
Land	₩ 127,351	₩ -	₩ 1,642	₩ -	₩ -	₩ 12,269	₩ 141,262
Buildings	582,226	-	9,549	(162)	(29,221)	8,340	570,733
(Government grant)	(265)	-	-	-	10	-	(255)
Structures	43,705	-	2,662	(62)	(2,835)	430	43,901
(Government grant)	(207)	-	-	-	16	-	(191)
Machinery	24,245	-	12,356	(17)	(7,641)	73	29,016
(Government grant)	-	-	-	-	-	-	-
Information technology equipment	111,072	-	34,819	(102)	(34,444)	-	111,344
Vehicles	45,350	-	14,194	(24)	(15,030)	-	44,489
(Government grant)	(75)	-	(222)	-	32	-	(266)
Furniture and fixtures	34,942	-	10,797	(2)	(12,857)	464	33,343
(Government grant)	(6)	-	(7)	-	6	-	(6)
Tools and equipment	16,520	-	1,478	-	(4,159)	545	14,384
Right-of-use assets	-	4,634	2,062	(20)	(3,248)	-	3,427
Construction-in-progress	36,259	-	58,751	-	-	(10,830)	84,179
	₩ 1,021,117	₩ 4,634	₩ 148,079	₩ (390)	₩ (109,370)	₩ 11,292	₩ 1,075,360

(*1) Increase due to asset contributions of ₩342 million is included.
(*2) Other changes are due to reclassification of construction-in-progress and replacement of the investment property and intangible assets.

As of December 31, 2020, the Group has acquired fire insurance for Heungkuk Fire & Marine Insurance Co., Ltd, Inc. and other companies for buildings and structures and has purchased general insurance of Samsung Fire & Marine Insurance CO.,LTD for vehicles.

15. Investment properties

Investment properties as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		
	Acquisition Cost	Accumulated depreciation	Carrying amount
Land	₩ 262,239	₩ -	₩ 262,239
Buildings	1,139,656	(462,610)	677,046
Structures	615,147	(340,670)	274,477
Construction-in-progress	348,843	-	348,843
	₩ 2,365,885	₩ (803,280)	₩ 1,562,605

	December 31, 2019		
	Acquisition cost	Accumulated depreciation	Carrying amount
Land	₩ 250,206	₩ -	₩ 250,206
Buildings	1,092,665	(427,228)	665,437
Structures	575,891	(322,039)	253,852
Construction-in-progress	224,780	-	224,780
	₩ 2,143,542	₩ (749,267)	₩ 1,394,274

15. Investment properties (cont'd)

Changes in investment properties for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020					
	Beginning balance	Acquisition (*1)	Disposals	Depreciation	Other (*2)	Ending balance
Land	₩ 250,206	₩ -	₩ -	₩ -	₩ 12,033	₩ 262,239
Buildings	665,437	12,710	(4,132)	(38,903)	41,934	677,046
Structures	253,852	931	(1,110)	(20,680)	41,484	274,477
Construction-in-progress	224,780	207,493	-	-	(83,430)	348,843
	₩ 1,394,274	₩ 221,134	₩ (5,242)	₩ (59,583)	₩ 12,022	₩ 1,562,605

(*1) Increase due to asset contributions of ₩13,641 million is included.
(*2) Other changes are due to reclassification of construction-in-progress and others.

	2019					
	Beginning balance	Acquisition (*1)	Disposals	Depreciation	Other (*2)	Ending balance
Land	₩ 247,669	₩ 1,250	₩ -	₩ -	₩ 1,287	₩ 250,206
Buildings	663,138	38,451	(262)	(37,772)	1,882	665,437
Structures	256,345	17,092	(441)	(21,260)	2,116	253,852
Construction-in-progress	158,664	70,114	-	-	(3,998)	224,780
	₩ 1,325,816	₩ 126,907	₩ (704)	₩ (59,032)	₩ 1,287	₩ 1,394,274

(*1) Increase due to asset contributions of ₩19,329 million is included.
(*2) Other changes are due to reclassification of construction-in-progress and others.

The amounts recognized in profit or loss from investment properties for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Rental income from investment properties	₩ 175,116	₩ 248,231
Direct operation expenses arising from investment properties	(105,650)	(102,928)
	₩ 69,466	₩ 145,303

There are no significant differences between the carrying amount and fair value of investment property.

All the investment properties are directly-owned by the Group.

16. Intangible assets

(1) Intangible assets as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020			
	Acquisition cost	Accumulated amortization	Accumulated impairment	Carrying amount
Software	₩ 179,515	₩ (152,309)	₩ -	₩ 27,206
Industrial property rights	1,360	(519)	-	841
Development cost	386	(386)	-	-
Intangible assets under development	10,526,432	-	(262,588)	10,263,844
Expressway operating rights (*1)	86,245,388	(31,518,170)	-	54,727,218
Others	10,214	-	-	10,214
	₩ 96,963,295	₩ (31,671,384)	₩ (262,588)	₩ 65,029,323

(*1) The Group mainly engages in the construction and management of roads. The Group considers the entire road as one cash-generating unit and determines that there is no indication of impairment on the right to operate toll roads.

	December 31, 2019			
	Acquisition cost	Accumulated amortization	Accumulated impairment	Carrying amount
Software	₩ 171,087	₩ (140,513)	₩ -	₩ 30,574
Industrial property rights	1,268	(453)	-	815
Development cost	386	(386)	-	-
Intangible assets under development	8,768,388	-	(262,588)	8,505,799
Expressway operating rights (*1)	83,239,441	(29,941,746)	-	53,297,695
Others	9,087	-	-	9,087
	₩ 92,189,655	₩ (30,083,097)	₩ (262,588)	₩ 61,843,970

(*1) The Group mainly engages in the construction and management of roads. The Group considers the entire road as one cash-generating unit and determines that there is no indication of impairment on the right to operate toll roads.

Changes in intangible assets for years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020					
	Beginning balance	Acquisition (*1)	Disposals	Amortization	Other (*2)	Ending balance
Software	₩ 30,574	₩ 120	₩ -	₩ (11,796)	₩ 8,308	₩ 27,206
Industrial property rights	815	-	-	(66)	92	841
Intangible assets under development	8,505,799	4,774,761	-	-	(3,016,716)	10,263,844
Expressway operating rights	53,297,695	-	(1,726)	(1,576,425)	3,007,674	54,727,218
Others	9,087	-	-	-	1,127	10,214
	₩ 61,843,970	₩ 4,774,881	₩ (1,726)	₩ (1,588,287)	₩ 485	₩ 65,029,323

(*1) Acquisition of intangible assets under development includes ₩155,835 million of capitalized interest and ₩28 million of contributed assets.
(*2) Other changes are due to reclassification of intangible assets under development.

16. Intangible assets (cont'd)

	2019					
	Beginning balance	Acquisition (*1)	Disposals	Amortization	Other (*2)	Ending balance
Software	₩ 33,511	₩ 6,033	₩ -	₩ (12,210)	₩ 3,240	₩ 30,574
Industrial property rights	754	118	-	(62)	4	815
Intangible assets under development	5,621,488	3,085,231	-	-	(200,919)	8,505,799
Expressway operating rights	53,641,938	772,920	(1,685)	(1,301,845)	186,367	53,297,695
Others	8,046	342	-	-	699	9,087
	₩ 59,305,737	₩ 3,864,644	₩ (1,685)	₩ (1,314,116)	₩ (10,610)	₩ 61,843,970

(*1) Acquisition of intangible assets under development includes ₩95,802 million of capitalized interest.
(*2) Other changes are due to reclassification of intangible assets under development.

Major individual intangible assets as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	Detail	December 31, 2020	December 31, 2019
Expressway operating rights	Right to highway management	₩ 54,727,218	₩ 53,297,695

(*) The Group amortizes service and operating rights using the investment cost recovery method.

17. Trade and other payables

Trade and other payables as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		December 31, 2019	
	Current	Non-current	Current	Non-current
Accounts payable	₩ 537,128	₩ -	₩ 566,031	₩ -
Accrued expenses	209,413	202	204,663	311,063
Leasehold deposits received	28,467	201,402	120,557	278,776
Other deposits received	2,217	-	1,876	-
Lease liabilities	3,624	2,510	1,411	1,787
	₩ 780,849	₩ 204,114	₩ 894,538	₩ 591,626

18. Borrowings and bonds

Borrowings and bonds as of December 31, 2020 and 2019, are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Current:		
Current portion of long-term borrowings	₩ 300,000	₩ -
Current portion of bonds	2,853,448	2,923,120
Less: discount on bonds	(688)	(281)
	3,152,760	2,922,839
Non-current:		
Long-term borrowings	700,000	900,000
Bonds	24,957,616	23,046,160
Less: discount on bonds	(6,032)	(7,142)
Financial liabilities at fair value through profit or loss (*)	108,238	111,326
	25,759,822	24,050,344
	₩ 28,912,582	₩ 26,973,183

(*) The Group has entered into an interest rate swap contract to hedge risk of fair value fluctuations due to changes in interest rates. The Group may eliminate or reduce an accounting mismatch arising from classification of corporate bonds and derivative instruments at amortized cost and fair value, respectively, through designating corporate bonds as financial liability at fair value through profit or loss.

Long-term borrowings as of December 31, 2020 and 2019 are as follows (Korean won in millions):

Type	Lenders	Interest rates	December 31, 2020 Carrying amount	December 31, 2019 Carrying amount
Loan operating funds	KEB Hana Bank	CD+0.08%	₩ 100,000	₩ 100,000
Loan operating funds	KEB Hana Bank	CD+0.36%	200,000	200,000
Loan operating funds	KEB Hana Bank	CD+0.22%	200,000	200,000
Loan operating funds	KEB Hana Bank	CD+0.34%	150,000	150,000
Loan operating funds	KEB Hana Bank	CD+0.34%	150,000	150,000
Loan operating funds	KEB Hana Bank	CD+0.16%	100,000	100,000
Loan operating funds	KEB Hana Bank	CD+0.34%	100,000	-
			1,000,000	900,000
Less: current portion			(300,000)	-
			₩ 700,000	₩ 900,000

Details of bonds as of December 31, 2020 and 2019 are as follows (In millions of Korean won, USD, HKD, EUR, CHF, CNY, SEK, CAD and AUD):

Series	Annual interest rate (%)	Maturity	December 31, 2020 Foreign currency	December 31, 2020 Local currency	December 31, 2019 Foreign currency	December 31, 2019 Local currency
408th	5.35	2027.02.14	-	₩ 180,000	-	₩ 180,000
410th	5.29	2027.02.27	-	80,000	-	80,000
411st	5.39	2037.02.27	-	50,000	-	50,000
416th	5.3	2022.04.11	-	100,000	-	100,000
419th	5.6	2022.07.27	-	108,238	-	111,326
425th	5.82	2022.10.30	-	70,000	-	70,000
464th	5.38	2024.03.17	-	90,000	-	90,000

18. Borrowings and bonds (cont'd)

			December 31, 2020		December 31, 2019	
Series	Annual interest rate (%)	Maturity	Foreign currency	Local currency	Foreign currency	Local currency
466th	5.45	2029.04.02	-	₩ 150,000	-	₩ 150,000
468th	5.35	2039.04.21	-	60,000	-	60,000
486th	5.24	2025.03.08	-	100,000	-	100,000
487th	5.15	2020.03.09	-	-	-	120,000
491st	5.24	2020.05.26	-	-	-	100,000
493rd	5.12	2020.06.16	-	-	-	140,000
494th	5.13	2020.06.28	-	-	-	150,000
495th	5.07	2020.07.06	-	-	-	120,000
496th	5.21	2025.07.13	-	140,000	-	140,000
497th	5.25	2030.07.20	-	90,000	-	90,000
498th	5.12	2025.07.27	-	100,000	-	100,000
500th	4.98	2040.08.26	-	120,000	-	120,000
501st	4.65	2020.09.07	-	-	-	120,000
503rd	4.57	2025.09.29	-	130,000	-	130,000
505th	4.58	2025.10.25	-	130,000	-	130,000
506th	4.74	2020.11.15	-	-	-	150,000
509th	32 x [annual average of absolute value (KRW CMS5 year closing price average-market average)]	2020.11.29	-	-	-	100,000
512nd	30 x [annual average of absolute value (KRW IRS 5-year closing average-time average)]	2020.12.10	-	-	-	80,000
515th	4.91	2030.12.17	-	100,000	-	100,000
518th	4.64	2021.03.14	-	150,000	-	150,000
520th	4.65	2021.04.18	-	150,000	-	150,000
522nd	4.62	2026.05.20	-	120,000	-	120,000
523rd	4.39	2021.05.27	-	80,000	-	80,000
524th	4.39	2021.06.14	-	150,000	-	150,000
525th	4.40	2021.06.21	-	130,000	-	130,000
526th	4.52	2026.06.28	-	130,000	-	130,000
528th	4.32	2021.07.26	-	190,000	-	190,000
529th	4.08	2021.08.16	-	70,000	-	70,000
530th	4.27	2031.08.23	-	200,000	-	200,000
531st	3.92	2021.09.16	-	120,000	-	120,000
532nd	4.31	2031.09.23	-	180,000	-	180,000
534th	4.40	2026.10.25	-	100,000	-	100,000
535th	4.15	2021.11.08	-	200,000	-	200,000
538th	4.08	2021.11.30	-	170,000	-	170,000
540th	4.01	2021.12.15	-	100,000	-	100,000
541st	4.04	2022.01.18	-	100,000	-	100,000
542nd	4.13	2027.01.31	-	150,000	-	150,000
543rd	4.25	2027.03.21	-	250,000	-	250,000
544th	4.14	2022.03.27	-	100,000	-	100,000
546th	4.00	2022.04.12	-	150,000	-	150,000
549th	3.99	2027.05.11	-	100,000	-	100,000
550th	3.83	2022.05.22	-	100,000	-	100,000
551st	4.05	2032.05.25	-	150,000	-	150,000
553rd	3.90	2027.06.15	-	70,000	-	70,000
554th	4.02	2032.06.27	-	150,000	-	150,000
555th	3.25	2022.07.24	-	150,000	-	150,000
556th	3.10	2027.08.30	-	100,000	-	100,000
558th	2.24%+0.10x(70%-Avg SIFMA/Avg USD 3m LIBOR)	2022.09.20	-	100,000	-	100,000
559th	3.14	2022.09.25	-	200,000	-	200,000
560th	3.48	2062.09.26	-	100,000	-	100,000
562nd	3.21	2022.12.11	-	150,000	-	150,000
563rd	3.37	2027.12.18	-	190,000	-	190,000
564th	3.22	2028.01.22	-	150,000	-	150,000
565th	3.13	2023.01.28	-	150,000	-	150,000

18. Borrowings and bonds (cont'd)

			December 31, 2020		December 31, 2019	
Series	Annual interest rate (%)	Maturity	Foreign currency	Local currency	Foreign currency	Local currency
567th	3.28	2033.02.13	-	₩ 150,000	-	₩ 150,000
568th	3.17	2028.02.27	-	100,000	-	100,000
569th	3.03	2023.03.21	-	150,000	-	150,000
570th	3.16	2033.03.27	-	150,000	-	150,000
573rd	3.25	2023.06.05	-	100,000	-	100,000
574th	3.42	2025.06.13	-	100,000	-	100,000
576th	3.53	2020.07.25	-	-	-	150,000
577th	3.68	2020.08.22	-	-	-	150,000
578th	3.76	2023.09.05	-	100,000	-	100,000
579th	3.56	2023.09.26	-	50,000	-	50,000
580th	3.62	2023.10.02	-	60,000	-	60,000
581st	3.46	2020.10.07	-	-	-	60,000
582nd	3.73	2028.10.10	-	100,000	-	100,000
583rd	3.58	2020.10.16	-	-	-	140,000
588th	4.35%X n/N n: Korea CMS 10-year interest rate <(or =) 6% and US CMS 10-year interest rate <(or =) 6% N: Total calendar days (365)	2023.12.09	-	30,000	-	30,000
589th	3.76	2020.12.12	-	-	-	80,000
592nd	3.68	2024.02.13	-	100,000	-	100,000
594th	3.40	2020.02.27	-	-	-	80,000
596th	3.64	2024.03.13	-	100,000	-	100,000
597th	3.43	2021.03.20	-	100,000	-	100,000
599th	3.65	2024.03.27	-	60,000	-	60,000
600th	3.65	2024.04.02	-	50,000	-	50,000
601st	3 X Spread Reference Average spread over a specific period Spread Reference Daily spread between calculators: 20Y EUR Swap interest rate-2Y EUR Swap interest rate	2024.04.04	-	30,000	-	30,000
603rd	3.66	2024.04.16	-	120,000	-	120,000
604th	3.41	2020.04.23	-	-	-	100,000
605th	3.24	2029.07.16	-	50,000	-	50,000
606th	Annual Min (4.20%, 3.00 × (avg spread (20 EUR CMS-2 EUR CMS)) × N / M), (Lower limit 0.00%)	2024.09.04	-	100,000	-	100,000
607th	2.95	2029.10.02	-	100,000	-	100,000
608th	3.00	2029.10.15	-	100,000	-	100,000
609th	2.96	2034.10.30	-	170,000	-	170,000
610th	2.69	2024.11.06	-	250,000	-	250,000
611st	2.86	2026.11.13	-	100,000	-	100,000
612nd	2.69	2022.11.20	-	100,000	-	100,000
614th	2.78	2024.12.24	-	50,000	-	50,000
615th	2.46	2025.02.13	-	190,000	-	190,000
616th	2.55	2030.02.27	-	200,000	-	200,000
617th	2.45	2025.03.06	-	100,000	-	100,000
618th	2.09	2020.03.16	-	-	-	140,000
619th	2.33	2030.04.16	-	100,000	-	100,000
620th	2.36	2025.04.24	-	90,000	-	90,000
622nd	2.80	2030.05.14	-	170,000	-	170,000
623rd	8.55% - 0.1 × [Average SIFMA / average 3month LIBOR] (Cap 5.50%, Floor 0.01% per year)	2030.05.15	-	30,000	-	30,000
625th	2.56	2025.05.28	-	70,000	-	70,000
626th	2.64	2025.06.19	-	130,000	-	130,000
627th	2.57	2025.07.22	-	150,000	-	150,000
628th	2.13	2020.07.30	-	-	-	100,000
631st	2.11*(USD 30Y CMS -USD 2Y CMS)+0.2% (Cap 5.50%, Floor 0.00% annual payment) 2) After the switch option exercise: 2.8% per year(fixed interest rate)	2030.08.19	-	50,000	-	50,000

18. Borrowings and bonds (cont'd)

			December 31, 2020		December 31, 2019	
Series	Annual interest rate (%)	Maturity	Foreign currency	Local currency	Foreign currency	Local currency
632nd	2.37	2025.08.19	-	₩ 80,000	-	₩ 80,000
633rd	2.55	2035.09.15	-	130,000	-	130,000
634th	4.0%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.25% per year) /Actual/365 2) 2) After the switch option exercise: 3.0 % per year (fixed interest rate)	2030.09.23	-	50,000	-	50,000
635th	2.24	2025.09.24	-	50,000	-	50,000
636th	3.3%*(KRW 10Y CMS -USD 1Y CMS) (Cap 4.50%, Floor 0.00% per year) 2) After the switch option exercise: 2.8% per year(fixed interest rate)	2030.10.28	-	50,000	-	50,000
637th	2.40	2025.11.12	-	150,000	-	150,000
638th	2.12	2020.11.25	-	-	-	50,000
639th	2.49	2030.11.30	-	200,000	-	200,000
640th	2.09	2020.12.14	-	-	-	180,000
641st	2.35	2030.12.16	-	120,000	-	120,000
642nd	1.98	2036.02.18	-	190,000	-	190,000
643rd	1.74	2021.03.04	-	100,000	-	100,000
644th	2.01	2046.05.25	-	150,000	-	150,000
645th	2.3%*(EUR 30Y CMS - EUR 5Y CMS) (Cap 3.00%, Floor 0.00% per year)	2031.06.23	-	30,000	-	30,000
646th	1.54	2036.07.20	-	150,000	-	150,000
648th	1.57	2046.08.26	-	100,000	-	100,000
650th	1.52	2021.10.17	-	110,000	-	110,000
651st	1.85	2046.10.24	-	130,000	-	130,000
652nd	1.90	2046.11.10	-	140,000	-	140,000
653rd	2.06	2021.11.24	-	200,000	-	200,000
654th	2.12	2021.12.08	-	160,000	-	160,000
655th	2.30	2047.02.17	-	150,000	-	150,000
656th	2.02	2022.02.27	-	140,000	-	140,000
657th	2.35	2047.03.17	-	110,000	-	110,000
658th	2.16	2024.03.29	-	50,000	-	50,000
659th	2.24	2027.03.29	-	20,000	-	20,000
660th	2.03	2022.04.18	-	100,000	-	100,000
661st	2.38	2037.04.19	-	110,000	-	110,000
662nd	2.31	2047.06.21	-	120,000	-	120,000
663rd	2.42	2037.08.24	-	140,000	-	140,000
664th	2.33	2027.08.31	-	70,000	-	70,000
665th	2.09	2022.09.07	-	60,000	-	60,000
666th	2.37	2032.09.08	-	160,000	-	160,000
667th	2.32	2027.09.15	-	160,000	-	160,000
668th	2.35	2047.09.21	-	150,000	-	150,000
669th	2.40	2037.09.27	-	100,000	-	100,000
670th	2.47	2037.10.12	-	150,000	-	150,000
671st	2.64	2037.11.03	-	150,000	-	150,000
672nd	2.63	2027.11.10	-	90,000	-	90,000
673rd	2.57	2022.11.16	-	110,000	-	110,000
674th	2.32	2020.11.20	-	-	-	100,000
675th	2.66	2047.11.24	-	170,000	-	170,000
676th	2.54	2047.12.08	-	100,000	-	100,000
677th	2.889	2048.02.21	-	150,000	-	150,000
678th	2.855	2038.03.09	-	130,000	-	130,000
679th	2.73	2023.03.14	-	170,000	-	170,000
680th	2.869	2048.05.10	-	100,000	-	100,000
681st	2.882	2033.05.18	-	110,000	-	110,000
682nd	2.669	2023.05.31	-	90,000	-	90,000
683rd	2.664	2048.06.28	-	90,000	-	90,000
684th	2.543	2023.06.28	-	110,000	-	110,000
685th	2.607	2038.07.19	-	120,000	-	120,000

18. Borrowings and bonds (cont'd)

			December 31, 2020		December 31, 2019	
Series	Annual interest rate (%)	Maturity	Foreign currency	Local currency	Foreign currency	Local currency
686th	2.299	2023.08.24	-	₩ 110,000	-	₩ 110,000
687th	2.301	2048.09.14	-	70,000	-	70,000
688th	2.361	2023.10.11	-	130,000	-	130,000
689th	2.349	2038.10.25	-	70,000	-	70,000
690th	2.202	2023.10.31	-	90,000	-	90,000
691st	2.183	2023.11.14	-	150,000	-	150,000
692nd	2.195	2048.11.22	-	90,000	-	90,000
693rd	1.99	2020.11.26	-	-	-	50,000
694th	2.4	2038.11.29	-	50,000	-	50,000
695th	2	2048.12.07	-	110,000	-	110,000
696th	2.029	2023.12.13	-	110,000	-	110,000
697th	1.954	2024.02.20	-	150,000	-	150,000
698th	2.147	2049.02.22	-	130,000	-	130,000
699th	2.151	2039.02.27	-	100,000	-	100,000
700th	2.143	2049.03.08	-	150,000	-	150,000
701st	2.129	2049.03.19	-	120,000	-	120,000
702nd	1.823	2022.04.04	-	150,000	-	150,000
703rd	1.963	2049.04.11	-	170,000	-	170,000
704th	1.976	2049.04.25	-	100,000	-	100,000
705th	1.89	2029.05.23	-	90,000	-	90,000
706th	1.787	2049.05.30	-	130,000	-	130,000
707th	1.672	2024.06.05	-	170,000	-	170,000
708th	1.589	2024.06.14	-	110,000	-	110,000
709th	1.512	2024.06.21	-	160,000	-	160,000
710th	1.593	2020.07.05	-	80,000	-	80,000
711st	1.531	2024.07.17	-	140,000	-	140,000
712nd	1.318	2049.08.22	-	120,000	-	120,000
713rd	1.416	2024.09.05	-	130,000	-	130,000
714th	1.467	2049.09.25	-	130,000	-	130,000
715th	1.454	2022.10.16	-	100,000	-	100,000
716th	1.522	2022.10.23	-	130,000	-	130,000
717th	1.802	2024.11.06	-	110,000	-	110,000
718th	1.833	2026.11.14	-	100,000	-	100,000
719th	1.665	2024.11.21	-	90,000	-	90,000
720th	1.715	2024.11.27	-	90,000	-	90,000
721st	1.556	2022.12.05	-	180,000	-	180,000
722nd	1.627	2024.12.12	-	190,000	-	190,000
723rd	1.666	2026.12.18	-	100,000	-	100,000
724th	1.298	2025.03.05	-	200,000	-	-
725th	1.518	2050.03.12	-	150,000	-	-
726th	1.567	2027.03.19	-	110,000	-	-
727th	1.658	2025.03.26	-	170,000	-	-
728th	1.749	2030.04.02	-	100,000	-	-
729th	1.780	2040.04.02	-	110,000	-	-
730th	1.469	2025.04.09	-	150,000	-	-
731st	1.705	2050.04.09	-	120,000	-	-
732nd	1.122	2023.04.17	-	190,000	-	-
733rd	1.598	2030.04.17	-	70,000	-	-
734th	1.271	2023.04.24	-	170,000	-	-
735th	1.727	2040.04.24	-	100,000	-	-
736th	1.101	2023.05.14	-	160,000	-	-
737th	1.578	2040.05.21	-	140,000	-	-
738th	1.504	2030.05.28	-	130,000	-	-
739th	1.628	2040.06.18	-	160,000	-	-
740th	1.437	2027.07.16	-	70,000	-	-
741st	0.741	2021.07.23	-	130,000	-	-
742nd	0.985	2023.07.23	-	130,000	-	-

18. Borrowings and bonds (cont'd)

			December 31, 2020		December 31, 2019	
Series	Annual interest rate (%)	Maturity	Foreign currency	Local currency	Foreign currency	Local currency
743rd	1.431	2027.09.24	-	₩ 110,000	-	₩ -
744th	0.979	2022.10.14	-	180,000	-	-
745th	1.648	2030.10.22	-	150,000	-	-
746th	1.706	2050.10.29	-	130,000	-	-
747th	1.678	2030.11.05	-	100,000	-	-
748th	1.731	2040.11.05	-	100,000	-	-
749th	1.467	2025.11.12	-	110,000	-	-
750th	1.809	2050.11.12	-	80,000	-	-
751st	1.101	2023.11.19	-	100,000	-	-
752nd	1.577	2027.11.19	-	80,000	-	-
753rd	1.453	2025.11.26	-	190,000	-	-
754th	1.789	2030.12.03	-	170,000	-	-
755th	1.121	2023.12.11	-	150,000	-	-
756th	1.859	2050.12.23	-	150,000	-	-
7th foreign bond	4.00	2022.03.02	HKD 452	63,438	HKD 452	67,194
9th foreign bond	3.88	2024.05.07	EUR 45	60,221	EUR 45	58,384
10th foreign bond	4.00	2027.05.07	EUR 23	30,780	EUR 23	29,841
18th foreign bond	3.02	2027.03.18	USD 50	54,400	USD 50	57,890
19th foreign bond	3.21	2030.11.30	USD 50	54,400	USD 50	57,890
20th foreign bond	3.10	2026.06.08	USD 100	108,800	USD 100	115,780
21st foreign bond	2.70	2026.10.26	USD 200	217,600	USD 200	231,560
22ndforeign bond	2.57	2031.07.05	USD 100	108,800	USD 100	115,780
26th foreign bond	3M LIBOR +0.70%	2020.04.20	-	-	USD 400	463,120
27th foreign bond	2.31	2032.04.28	SEK 720	95,594	SEK 720	89,179
28th foreign bond	3.03	2032.05.11	CAD 135	115,196	CAD 135	119,686
29th foreign bond	0.25	2024.06.07	CHF 230	283,896	CHF 230	274,970
30th foreign bond	3.02	2023.03.05	HKD 800	112,280	HKD 800	118,928
31st foreign bond	4.73	2021.03.28	CNY 1,300	217,048	CNY 1,300	215,462
32nd foreign bond	3.625	2021.10.22	USD 300	326,400	USD 300	335,430
33rd foreign bond	3M USD LIBOR +0.64%	2022.07.25	USD 150	163,200	USD 150	173,670
34th foreign bond	3M USD LIBOR +0.60%	2022.11.25	USD 70	76,160	USD 70	81,046
35th foreign bond	3M USD LIBOR +0.60%	2022.11.25	USD 200	217,600	USD 200	231,560
36th foreign bond	3M USD LIBOR +1.20%	2025.06.02	USD 100	108,800	-	-
37th foreign bond	0.928	2023.09.02	AUD 225	188,226	-	-
38th foreign bond	BBSW+0.72%	2023.09.02	AUD 225	188,226	-	-
				27,919,302		26,080,606
Less: discount on bonds				(6,720)		(7,423)
				27,912,582		26,073,183
Less: current portion of bonds				(2,853,448)		(2,923,120)
Less: current portion of discount on bonds				688		281
Less: financial liabilities at fair value through profit or loss				(108,238)		(111,326)
				₩ 24,951,584		₩ 23,039,018

The repayment schedule of borrowings and bonds (excluding borrowings with asset-backed securitization) as of December 31, 2020 and 2019 is as follows (Korean won in millions):

	December 31, 2020		
	Borrowings	Bonds	Total
Within 1 year	₩ 300,000	₩ 2,853,448	₩ 3,153,448
1 year–5 years	700,000	11,410,285	12,110,285
More than 5 years	-	13,655,569	13,655,569
	₩ 1,000,000	₩ 27,919,302	₩ 28,919,302

18. Borrowings and bonds (cont'd)

	December 31, 2019		
	Borrowings	Bonds	Total
Within 1 year	₩ -	₩ 2,923,120	₩ 2,923,120
1 year–5 years	900,000	10,089,880	10,989,880
More than 5 years	-	13,067,606	13,067,606
	₩ 900,000	₩ 26,080,606	₩ 26,980,606

19. Leases

The Group has lease contracts for buildings and vehicles used for its operations. Leases of buildings and vehicles generally have lease terms between 2 and 4 years.

The Group also has certain leases of machinery with lease terms of 12 months or less and leases with low-value assets less than ₩5 million. The Group applies the short-term leases and low-value assets recognition exemptions for these leases.

Details of right-of-use assets as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		
	Acquisition cost	Accumulated depreciation	Carrying amount
Buildings	₩ 3,264	₩ (1,804)	₩ 1,460
Vehicles	9,897	(5,299)	4,598
	₩ 13,161	₩ (7,103)	₩ 6,058

	December 31, 2019		
	Acquisition cost	Accumulated depreciation	Carrying amount
Buildings	₩ 2,196	₩ (732)	₩ 1,464
Vehicles	4,475	(2,513)	1,962
	₩ 6,671	₩ (3,245)	₩ 3,426

Changes in right-of-use assets for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	Building	Vehicles	Total
As of January 1, 2020	₩ 1,464	₩ 1,962	₩ 3,426
Acquisition	1,827	5,657	7,484
Depreciation	(1,336)	(2,883)	(4,219)
Disposals	(495)	(138)	(633)
As of December 31, 2020	₩ 1,460	₩ 4,598	₩ 6,058

	Building	Vehicles	Total
As of January 1, 2019 (restated)	₩ -	₩ -	₩ -
Change of accounting policy	870	3,764	4,634
Acquisition	1,350	711	2,061
Depreciation	(735)	(2,513)	(3,248)
Disposals	(21)	-	(21)
As of December 31, 2019 (restated)	₩ 1,464	₩ 1,962	₩ 3,426

19. Leases (cont'd)

Details of maturity analysis of lease liabilities as of December 31, 2020 and December 31, 2019 are as follows (Korean won in millions):

	2020	2019
Not later than one year	₩ 3,682	₩ 1,499
Later than one year and not later than five years	2,611	1,917
Later than five years	-	-
Total undiscounted lease payments	6,293	3,416
Amount of present value adjustment	(159)	(218)
Present value of lease payments	₩ 6,134	₩ 3,198

Current and non-current distinction of the lease liabilities as of December 31, 2020 and December 31, 2019 are as follows (Korean won in millions):

	2020	2019
Current	₩ 3,624	₩ 1,411
Non-current	2,510	1,787
	₩ 6,134	₩ 3,198

The amount recognized in profit or loss during the years ended December 31, 2020 and 2019 from the position of the lessee is as follows (Korean won in millions):

	2020	2019
Depreciation expense of right-of-use assets (buildings)	₩ 1,336	₩ 651
Depreciation expense of right-of-use assets (vehicles)	2,883	2,597
Expense relating to short-term leases	14,148	4,255
Expense relating to leases of low-value assets	1,831	1,418
Interest expense on lease liabilities	196	135
Total amount recognized in profit or loss	₩ 20,394	₩ 9,057

Changes in lease liabilities for the years ended December 31, 2020 are as follows (Korean won in millions):

	Current	Non-current
As of January 1, 2020	₩ 1,411	₩ 1,787
Increase	4,038	4,151
Decrease	(1,917)	(3,532)
Interest expenses on lease liabilities	92	104
As of December 31, 2020	₩ 3,624	₩ 2,510

The Group recognized total lease-related cash outflows of ₩4,096 million in 2020 and ₩3,426 million in 2019 in the consolidated statements of cash flows.

20. Employee benefits

Defined contribution plan

The Group operates a defined contribution plan, which requires contributions to be made to separately administered funds. If employees retire prior to meeting the conditions of the defined contribution plan, the Group's contribution reduces by the amount of contribution forfeited.

Contribution amounting to ₩ 24,279 million (2019: ₩11,375 million) in the consolidated statements of profit or loss and other comprehensive income represents the amount to be contributed by the Group, which is calculated based on the rates stated under the pension plan. The Group made all contributions to be paid for the year ended December 31, 2020. On the other hand, profit or loss from the defined contribution pension plan during the years ended December 31, 2020 and 2019 was recognized as the following in the consolidated financial statements (Korean won in millions):

	2020	2019
Cost of sales	₩ 14,380	₩ 7,649
Direct cost of business	2,786	1,331
Selling and administrative expenses (retirement benefits)	6,294	2,025
Selling and administrative expenses (others)	819	370
Total	₩ 24,279	₩ 11,375

Defined benefit plan

The Group operates a defined benefit plan for employees. A recent valuation on actuarial assumptions for plan assets and defined benefit obligation was performed by Dlog, an actuary consulting firm, on January 18, 2021. The present value of defined benefit obligation and related service costs are determined using the projected unit credit method.

The component of net defined benefit obligation as of December 31, 2020 and 2019 is as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Present value of defined benefit obligation	₩ 311,909	₩ 240,916
Fair value of plan assets	(269,955)	(175,670)
Net defined benefit obligation	₩ 41,954	₩ 65,246

Changes in present value of defined benefit obligation for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Defined benefit obligation at beginning of year	₩ 240,916	₩ 167,475
Current service cost	50,662	33,781
Past service cost	-	20,862
Interest expenses on the DBO (*)	4,795	3,897
Transfer effect of newcomer	8,733	3,739
Remeasurements of defined benefit plan	11,841	17,508
Benefits paid	(5,038)	(6,347)
Defined benefit obligation at end of year	₩ 311,909	₩ 240,916

(*) The rate used to discount DBO was determined by reference to market yields at the end of the reporting period on high quality corporate bonds (AAA).

20. Employee benefits (cont'd)

Change in fair value of plan assets for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020		2019
Fair value of plan assets at beginning of year	₩	175,670	₩	143,226
Interest income on plan assets (*)		3,174		2,772
Remeasurements of defined benefit plan		392		62
Benefits paid		(3,227)		(5,006)
Contributions		93,946		34,900
Others		-		(284)
Fair value of plan assets at end of year	₩	269,955	₩	175,670

(*) Interest income on plan assets was determined by reference to market yields at the end of the reporting period on high quality corporate bonds (AAA).

Expenses recognized in profit or loss for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020		2019
Current service costs	₩	50,662	₩	33,781
Past service cost		-		20,862
Interest expenses on liabilities		4,795		3,897
Transfer effect of newcomer		8,733		3,461
Interest income on plan assets		(3,174)		(2,772)
Total	₩	61,016	₩	59,231

The above profit or loss was recognized in the consolidated financial statements as follows:

		2020		2019
Cost of sales	₩	46,607	₩	41,039
Direct cost of business		3,422		2,781
Selling and administrative expenses (retirement benefit)		9,652		14,350
Selling and administrative expenses (others)		1,335		1,061
Total	₩	61,016	₩	59,231

Re-measurements recognized in other comprehensive income for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020		2019
Actuarial gain/loss	₩	(11,841)	₩	(17,508)
Return on plan assets		392		62
Total	₩	(11,449)	₩	(17,446)

The Group expects to make a contribution of ₩93,946 million in the next year in related to the defined benefit plan.

21. Provisions

Provisions as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		December 31, 2019	
	Current	Non-current	Current	Non-current
Provisions for litigation	₩ -	₩ 592,735	₩ -	₩ 325,763
Provisions for employee benefits	127,945	-	114,438	-
Provisions for GHG emission	850	-	2,573	-
	₩ 128,795	₩ 592,735	₩ 117,011	₩ 325,763

Changes in provisions for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020				
	Beginning balance	Additional provisions made	Amount used	Unused amounts reversed	Ending balance
Provisions for litigation	₩ 325,763	₩ 287,166	₩ -	₩ (20,194)	₩ 592,735
Provisions for employee benefits	114,438	127,945	(114,438)	-	127,945
Provisions for GHG emission	2,573	177	(1,357)	(543)	850
	₩ 442,774	₩ 415,288	₩ (115,795)	₩ (20,737)	₩ 721,530

	2019				
	Beginning balance	Additional provisions made	Amount used	Unused amounts reversed	Ending balance
Provisions for litigation	₩ 32,736	₩ 293,347	₩ (146)	₩ (175)	₩ 325,763
Provisions for employee benefits	84,559	114,438	(84,559)	-	114,438
Provisions for GHG emission	1,296	1,276	-	-	2,573
	₩ 118,591	₩ 409,062	₩ (84,704)	₩ (175)	₩ 442,774

22. Government grants

Accounting for government grants

The Group presents government grants in the form of deductions from the related assets in accordance with the Article 44 of the Korean Government-owned and Quasi-government Accounting Standards.

Government grants presented as a deduction to each related assets as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Buildings	₩ 245	₩ 255
Structures	175	191
Vehicles	346	266
Furniture and fixtures	5	6
	₩ 771	₩ 718

22. Government grants (cont'd)

Changes in government grants presented as a deduction to each related assets for the years ended December 31 2020 and 2019 are as follows (Korean won in millions):

	2020			
	Beginning balance	Increase	Decrease	Ending balance
Buildings	₩ 255	₩ -	₩ (10)	₩ 245
Structures	191	-	(16)	175
Vehicles	266	160	(80)	346
Furniture and fixtures	6	-	(1)	5
	₩ 718	₩ 160	₩ (107)	₩ 771

	2019			
	Beginning balance	Increase	Decrease	Ending balance
Buildings	₩ 265	₩ -	₩ (10)	₩ 255
Structures	207	-	(16)	191
Vehicles	75	222	(32)	266
Furniture and fixtures	6	7	(6)	6
	₩ 553	₩ 229	₩ (64)	₩ 718

Income relates to government grants recognized during the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Offset of depreciation	₩ 108	₩ 64

23. Non-financial liabilities

Non-financial liabilities as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		December 31, 2019	
	Current	Non-current	Current	Non-current
Advances received	₩ 235,910	₩ -	₩ 50,321	₩ -
Unearned revenue	1,176	34,413	2,137	55,009
Withholdings	22,171	-	83,734	-
Other non-financial liabilities	77	-	77	-
	₩ 259,334	₩ 34,413	₩ 136,270	₩ 55,009

24. Consignment management service

In accordance with Article 12 of *Korea Expressway Corporation Act,* the Group constructs, maintains and repairs expressways and other works related to expressways on behalf of the Government and local governments.

In accordance with Article 44-3 of Korean Government-owned and Quasi-government Accounting Regulations and Standards, the Group recognizes the fund received from the Government, but unused at the year-end for the consignment management service as a deduction to cash and cash equivalents.

24. Consignment management service (cont'd)

Unused funds or funds to be returned related to the consignment management service as of December 31, 2020 and 2019 are as follows (Korean won in millions):

Accounts	Type	Counter parts	December 31, 2020	December 31, 2019
Consignment management service fund	Unexecuted deposit fund	Government	₩ 80,031	₩ 70,321
Consignment management service fund	Unexecuted deposit fund	Public institutions	268,286	242,418
			₩ 348,317	₩ 312,738

Changes in unused funds or funds to be returned related to the consignment management service for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020				
Accounts	Counter- party	Beginning balance	Increase	Decrease	Others	Ending balance
Consignment management service fund	Government	₩ 70,321	₩ 55,624	₩ 45,913	₩ -	₩ 80,031
Consignment management service fund	Public institutions	242,418	283,257	257,389	-	268,286
		₩ 312,738	₩ 338,881	₩ 303,302	₩ -	₩ 348,317

(*) Revenue and expenses of the consignment management service are amounts that reflect the effect of applying special accounting for transportation facilities, transfer between accounts and others, and may differ from those in the details on execution of funds.

		2019				
Accounts	Counter-party	Beginning balance	Increase	Decrease	Others	Ending balance
Consignment management service fund	Government	₩ 58,752	₩ 88,507	₩ 76,939	₩ -	₩ 70,321
Consignment management service fund	Public institutions	108,282	331,577	197,441	-	242,418
		₩ 167,034	₩ 420,084	₩ 274,379	₩ -	₩ 312,738

(*) Revenue and expenses of the consignment management service are amounts that reflect the effect of applying special accounting for transportation facilities, transfer between accounts and others, and may differ from those in the details on execution of funds.

Revenue and expenses recognized related to the consignment management service in the consolidated financial statements for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020		2019	
	Revenue	Expense	Revenue	Expense
Construction	₩ 316,080	₩ 316,080	₩ 157,216	₩ 157,216
Purchase of lots for expressways	1,091	1,091	842	842
Operation of Incheon Bridge	4,523	4,523	13,709	13,709
Safety inspection service for non-management authority	2,061	2,061	1,346	1,346
	₩ 323,755	₩ 323,755	₩ 173,113	₩ 173,113

25. Share capital

The number of authorized shares of the Company is 4,000,000,000 shares and the number of shares issued as of December 31, 2020 and 2019 is 3,659,957,373 shares and 3,493,725,473 shares, respectively. The par value is ₩10,000 and the capital stock as of December 31, 2020 and 2019 is as follows (Korean won in billions):

	December 31, 2020		December 31, 2019	
	Government	Non-government	Government	Non-government
Common share	₩ 32,230	₩ 4,369	₩ 30,344	₩ 4,593

Changes in the number of shares issued for the years ended December 31, 2020 and 2019 are as follows (In shares):

	2020	2019
Beginning number of shares	₩ 3,493,725,473	₩ 3,348,924,573
Capital increased by issuing new shares	166,231,900	144,800,900
Ending number of shares	₩ 3,659,957,373	₩ 3,493,725,473

26. Retained earnings and dividends

Details of retained earnings as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Legal reserve (*)	₩ 458,803	₩ 439,089
Other reserve	990,544	974,276
Unappropriated retained earnings	6,488	71,838
	₩ 1,455,835	₩ 1,485,204

(*) The *Korea Expressway Corporation Act* requires the Group to appropriate, as a legal reserve, at least 20% of net income for each period, until the reserve equals 50% of share capital. The legal reserve may not be utilized for cash dividends but may be used to offset a future deficit, if any, or may be transferred to share capital.

Details of other reserves as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Reserve for business expansion	₩ 990,544	₩ 974,276

Changes in retained earnings for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Beginning balance	₩ 1,485,204	₩ 1,438,940
Profit for the year attributable to owners of the parent	27,462	99,630
Dividends paid	(38,431)	(30,140)
Remeasurements of defined benefit plans	(11,450)	(17,446)
Amortization of share discount	(6,950)	(5,779)
Ending balance	₩ 1,455,835	₩ 1,485,204

26. Retained earnings and dividends (cont'd)

Dividends approved for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions, except dividends per share):

	2020	2019
Dividends declared (₩11 and ₩9 per share in 2020 and 2019, respectively)	₩ 38,431	₩ 30,140

Changes in remeasurements of defined benefit plans for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Beginning balance	₩ (88,790)	₩ (71,344)
Changes	(11,450)	(17,446)
Ending balance	₩ (100,240)	₩ (88,790)

27. Other components of equity

Details of other components of equity as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Accumulated other comprehensive income (loss):		
Gain on valuation of financial assets at fair value through other comprehensive income	(42,450)	(42,188)
Loss on hedging instruments in a cash flow hedge	13,579	(48,716)
Share of other comprehensive income of associates and joint ventures	3,163	3,175
	(25,708)	(87,729)
Others	(3)	(3)
	₩ (25,710)	₩ (87,732)

Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2020 and 2019, are as follows (Korean won in millions):

	2020	2019
Beginning balance	₩ (87,729)	₩ (114,086)
Loss on valuation of financial assets at fair value through other comprehensive income	(262)	331
Gain (loss) on valuation of cash flow hedges	62,295	26,482
Share of other comprehensive income of associates and joint ventures	(11)	(456)
Non-controlling interests	-	-
Ending balance	₩ (25,708)	₩ (87,729)

28. Revenue

Details of revenue from continuing operations, which excludes other income, other gains and finance income, for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Revenue from product sales:		
Sales of oil	₩ 230,909	₩ 233,107
	230,909	233,107
Revenue from services:		
Operation of toll expressways	3,958,912	4,117,494
Operation of other expressways	4,663	4,285
Rental income from service areas	109,664	193,722
Rental income from gas stations	68,624	60,003
Others incidental business	13,866	20,204
Management of privately funded expressways	44,257	69,344
Indemnity for loss on land	673	9
Operation of information centers	144,291	30,510
Others	49,726	81,132
	4,394,676	4,576,702
Construction contract revenue:		
Construction business	4,608,162	3,738,960
	4,608,162	3,738,960
Revenue from consignment management service:		
Income from privately funded land purchase map supporting business	1,091	842
Other map supporting business	6,584	15,055
Consignment construction business	316,080	157,216
	323,755	173,113
	₩ 9,557,503	₩ 8,721,882

29. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Contribution to the employee welfare fund	₩ 10,490	₩ 5,352
Salaries	113,450	113,352
Severance and retirement benefits	15,946	16,374
Termination benefits	2,405	1,319
Employee welfares	12,614	14,876
Insurance	83	176
Depreciation	26,741	22,290
Amortization	11,398	11,710
Bad debt expenses	2,638	2,916
Service fees	4,834	9,004
Advertising	3,460	2,701
Training	4,945	5,150
Vehicles maintenance	614	466
Publication	596	657
Business promotion	143	163
Rents	2,907	2,636
Communications	642	829
Taxes and dues	35,152	4,820

29. Selling and administrative expenses (cont'd)

	2020		2019	
Supplies		1,569		1,627
Utilities		2,460		2,533
Repairs		2,418		2,697
Development expenses		6,294		5,611
Travel		2,412		1,809
Clothing fee		232		528
Survey and analysis		2,896		1,409
Sales promotion fee		-		9
Other		54,797		51,491
	₩	322,136	₩	282,506

Details of other selling and administrative expenses for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020		2019	
Research salaries	₩	22,896	₩	20,698
Research expenses		28,946		27,352
Others		2,955		3,441
	₩	54,797	₩	51,491

30. Other income and expenses

Details of other income for the years ended December 31, 2020 and 2019, are as follows (Korean won in millions):

	2020		2019	
Reversal of other provisions	₩	20,194	₩	175
Reversal of other allowance for doubtful accounts		-		497
Gain on contribution of assets		13,766		19,998
Gain on exemption of debts		181		-
Compensation and reparation income		13,871		26,727
Rental income		38,652		37,962
Others (*1)		40,225		19,881
	₩	126,889	₩	105,239

(*1) Details of "others" in other income for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020		2019	
Reverse of short-term employee benefits (paid annual leave)	₩	1,779	₩	4,141
Cause deductible income		5,885		6,105
Value-added tax refund		4		-
Other income		32,557		9,634
	₩	40,225	₩	19,881

30. Other income and expenses (cont'd)

Details of other expenses for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020		2019
Increase in other provisions	₩	287,166	₩	293,347
Other bad debt expenses		646		1,320
Compensation and reparation expenses		4,532		7,488
Donations		27,220		3,332
Others (*2)		22,779		43,783
	₩	342,343	₩	349,269

(*2) Details of "others" in other expenses for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020		2019
Short-term employee benefits (paid annual leave)	₩	11,321	₩	12,375
Attributable fee		6,231		6,653
Parking lot communication facility use charges		31		55
Other expenses		5,196		24,699
	₩	22,779	₩	43,783

31. Other loss, net

Details of other net loss for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020		2019
Gain on disposal of property. plant and equipment	₩	2,606	₩	1,309
Gain on disposal of intangible assets		5,592		4,041
Gain on insurance settlements		47		27
Gain on disposition of investment property		1		-
Gain on foreign currency translations		1,021		403
Gain on foreign currency transactions		9		311
Other gain (*1)		1,482		906
Loss on disposal of property and equipment		(2,060)		(224)
Loss on disposal of intangible assets		-		(2)
Loss on disposal of investment property		(5,196)		(469)
Loss on foreign currency translations		(262)		(423)
Loss on foreign currency transactions		(119)		(45)
Other loss (*2)		(17,840)		(26,225)
	₩	(14,719)	₩	(20,390)

(*1) Details of other gain for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

		2020		2019
Gain on disposal of wastes	₩	1,482	₩	906

31. Other gain and loss, net (cont'd)

(*2) Details of other loss for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Loss on disasters	₩ 17,840	₩ 26,224
Loss due to inventory obsolescence	-	1
Total	₩ 17,840	₩ 26,225

32. Finance income

Details of finance income for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Interest income	₩ 9,858	₩ 9,648
Dividend income	161	28
Gain on disposal of financial assets	2,840	2,243
Gain on valuation of financial assets at fair value through profit or loss	14,712	31,335
Gain on valuation of derivative instruments	19,703	82,708
Gain on transaction of derivative instruments	-	12,360
Gain on foreign currency translations	122,335	5,502
Gain on foreign currency transactions	3,520	-
Other financial income	7	-
	₩ 173,136	₩ 143,825

Details of interest income included in finance income for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Cash and cash equivalents	₩ 7,637	₩ 7,465
Loans and receivables	1,033	1,129
Trade and other receivables	1,188	1,054
	₩ 9,858	₩ 9,648

33. Finance costs

Details of finance costs for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Interest expenses	₩ 626,140	₩ 722,542
Loss on disposal of financial assets	2,828	2,702
Loss on valuation of financial assets at fair value through profit or loss	13,317	23,296
Loss on valuation of derivative instruments	122,323	5,402
Loss on transaction of derivative	3,520	-
Loss on hedged item related to fair value hedge	3,088	2,273
Loss on foreign currency translations	19,996	82,715
Loss on foreign currency transactions	-	12,360
	₩ 791,213	₩ 851,290

33. Finance costs (cont'd)

Details of interest expenses included in finance costs for the year ended December 31, 2020 and 2019, are as follows (Korean won in millions):

	2020	2019
Trade and other payables	₩ 8,318	₩ 15,764
Financial liabilities at fair value through profit or loss	1,267	2,832
Short-term borrowings	264	198
Long-term borrowings	20,371	20,490
Bonds	751,671	779,010
Lease interest	84	50
	781,975	818,344
Less: capitalization of borrowing costs	(155,835)	(95,802)
	₩ 626,140	₩ 722,542

The weighted-average capitalization rates for borrowings for the years ended December 31, 2020 and 2019 are 2.77% and 3.07%, respectively.

34. Income tax expense (benefit)

The components of income tax expense (benefit) for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Current income taxes	₩ 15,954	₩ 167,672
Adjustments of taxes of prior periods	(271,258)	-
Income tax expense (benefit)	₩ (255,304)	₩ 167,672

The reconciliation between profit (loss) before income tax and income tax expense (benefit) for the years ended December 31, 2020 and 2019 is as follows (Korean won in millions):

	2020	2019
Profit (loss) before income tax	₩ (227,842)	₩ 267,302
Applicable tax rates	24.2%	24.2%
Income tax at the Group's statutory tax rates	(55,138)	64,687
Adjustment:		
Effect of step-up tax rates	(462)	(462)
Adjustments of taxes of prior periods	(271,258)	-
Non-taxable income	(9,457)	(16,841)
Non-deductible expenses	24,471	22,833
Effect of changes in temporary differences unrecognized for deferred taxes	56,540	97,454
	(200,166)	102,985
Income tax expense (benefit)	₩ (255,304)	₩ 167,672
Effective tax rate	-	62.73%

As of December 31, 2020 and 2019, the Group has not recognized deferred tax assets on net deductible temporary differences and unused tax losses as it is not probable that taxable profit will be available against which the temporary differences and unused tax losses can be utilized.

35. Expenses by nature

Details of expenses by nature for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	Change in inventories		Selling and administrative expenses		Cost of sales		Total	
	2020	2019	2020	2019	2020	2019	2020	2019
Changes in inventories	₩ 494	₩ 2,581	₩ -	₩ -	₩ -	₩ -	₩ 494	₩ 2,581
Inventories purchased	446,040	419,923	-	-	-	-	446,040	419,923
Contribution to the employee welfare fund	-	-	10,490	5,352	-	-	10,490	5,352
Salaries	-	-	113,450	113,352	646,879	349,324	760,329	462,676
Severance and retirement benefits	-	-	15,946	16,374	57,158	39,868	73,104	56,242
Termination benefits	-	-	2,405	1,319	2,389	1,852	4,793	3,171
Employee welfare	-	-	12,614	14,876	86,666	48,354	99,280	63,230
Insurance	-	-	83	176	997	202	1,081	378
Depreciation	-	-	26,741	22,290	150,989	146,112	177,730	168,402
Amortization	-	-	11,398	11,710	1,576,890	1,302,406	1,588,287	1,314,116
Bad debt expense	-	-	2,638	2,916	-	-	2,638	2,916
Service fees	-	-	4,834	9,004	88,951	250,567	93,785	259,571
Advertisement	-	-	3,460	2,701	9,019	9,365	12,479	12,066
Training	-	-	4,945	5,150	2,513	3,507	7,458	8,658
Vehicles maintenance	-	-	614	466	21,691	21,258	22,305	21,723
Publication	-	-	595	657	1,965	2,703	2,560	3,360
Business promotion	-	-	143	163	165	263	308	426
Rents	-	-	2,907	2,636	3,575	1,655	6,483	4,292
Communication	-	-	642	829	2,666	2,514	3,308	3,343
Taxes and dues	-	-	35,152	4,820	47,554	40,379	82,705	45,199
Supplies	-	-	1,569	1,627	5,573	4,099	7,142	5,726
Utilities	-	-	2,460	2,533	75,398	73,738	77,858	76,271
Repairs	-	-	2,418	2,697	416,207	386,406	418,625	389,103
Development expenses	-	-	6,293	5,611	2,506	2,053	8,799	7,664
Travel	-	-	2,412	1,809	1,976	2,598	4,388	4,407
Clothes	-	-	232	528	3,605	3,801	3,837	4,329
Survey and analysis	-	-	2,896	1,409	1,167	686	4,064	2,095
Sales promotion expenses	-	-	-	9	620	1,102	620	1,111
Other selling and administrative expenses	-	-	54,797	51,491	-	-	54,797	51,491
Other cost of sales	-	-	-	-	4,958,757	4,083,322	4,958,757	4,083,322
	₩ 446,534	₩ 422,504	₩ 322,136	₩ 282,506	₩ 8,165,874	₩ 6,778,134	₩ 8,934,543	₩ 7,483,144

36. Earnings per share

There are no dilutive securities, and the Group's basic earnings per share for the years ended December 31, 2020 and 2019 are as follows (Korean won):

	2020	2019
Profit for the year attributable to owners of the parent	₩ 27,462,302,659	₩ 99,630,005,612
Weighted-average number of ordinary shares outstanding (in shares) (*)	3,584,862,760	3,435,482,862
Basic earnings per share	₩ 8	₩ 29

36. Earnings per share(cont'd)

(*) the weighted-average number of ordinary shares outstanding during this reporting period

	Shares	Dates	Accumulated number
As of January 1, 2020	3,493,725,473	366	635,858,036,086
1st Acquisition of governmental investment	11,260,000	310	3,490,600,000
2nd Acquisition of governmental investment	20,920,000	288	6,024,960,000
3rd Acquisition of governmental investment	11,690,000	277	3,238,130,000
4th Acquisition of governmental investment	30,390,000	276	8,387,640,000
5th Acquisition of governmental investment	12,800,000	247	3,161,600,000
6th Acquisition of governmental investment	9,000,000	197	1,773,000,000
7th Acquisition of governmental investment	9,080,000	186	1,688,880,000
8th Acquisition of governmental investment	5,640,000	154	868,560,000
9th Acquisition of governmental investment	20,730,000	123	2,549,790,000
10th Acquisition of governmental investment	4,200,000	95	399,000,000
11th Acquisition of governmental investment	7,620,000	94	716,280,000
12th Acquisition of governmental investment	13,110,000	63	825,930,000
13th Acquisition of governmental investment	6,250,000	32	200,000,000
14th Acquisition of governmental investment	3,541,900	9	31,877,100
			÷366
The weighted average number of ordinary shares			3,584,862,760

37. Financial instruments by category

Financial assets and liabilities by categories as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020				
	Financial assets at FVPL	Financial assets at amortized cost	Financial assets at FVOCI	Fair value hedge financial assets	Total
Current financial assets:					
Cash and cash equivalents	₩ -	₩ 508,280	₩ -	₩ -	₩ 508,280
Derivative assets	-	-	-	5,058	5,058
Loans and receivables	-	6,775	-	-	6,775
Short-term financial assets	-	45,000	-	-	45,000
Other financial assets	-	323,468	-	-	323,468
	-	883,523	-	5,058	888,581
Trade and other receivables	-	297,385	-	-	297,385
	₩ -	₩ 1,180,908	₩ -	₩ 5,058	₩ 1,185,966

	December 31, 2020				
	Financial assets at FVPL	Financial assets at amortized cost	Financial assets at FVOCI	Fair value hedge financial assets	Total
Non-current financial assets:					
Derivative assets	₩ -	₩ -	₩ -	₩ 47,177	₩ 47,177
Financial assets at FVPL	52,070	-	-	-	52,070
Financial assets at FVOCI	-	-	21,601	-	21,601
Loans and receivables	-	25,932	-	-	25,932
	52,070	25,932	21,601	47,177	146,780
Trade and other receivables	-	109,235	-	-	109,235
	₩ 52,070	₩ 135,167	₩ 21,601	₩ 47,177	₩ 256,015

37. Financial instruments by category (cont'd)

	December 31, 2020			
	Financial liabilities at FVPL	Financial liabilities at amortized cost	Fair value hedge financial liabilities	Total
Current financial liabilities:				
Long-term borrowings	₩ -	₩ 300,000	₩ -	₩ 300,000
Bonds		2,852,760	-	2,852,760
Derivative liabilities	-	-	9,706	9,706
	-	3,152,760	9,706	3,162,466
Trade and other payables	-	780,849	-	780,849
	₩ -	₩ 3,933,609	₩ 9,706	₩ 3,943,315

	December 31, 2020			
	Financial liabilities at FVPL	Financial liabilities at amortized cost	Fair value hedge financial liabilities	Total
Non-current financial liabilities:				
Financial liabilities at FVPL	₩ 113,827	₩ -	₩ -	₩ 113,827
Long-term borrowings	-	700,000	-	700,000
Bonds	-	24,951,584	-	24,951,584
Derivative liabilities	-	-	106,960	106,960
	113,827	25,651,584	106,960	25,872,371
Trade and other payables	-	204,114	-	204,114
	₩ 113,827	₩ 25,855,698	₩ 106,960	₩ 26,076,485

	December 31, 2019				
	Financial assets at FVPL	Financial assets at amortized cost	Financial assets at FVOCI	Fair value hedge financial assets	Total
Current financial assets:					
Cash and cash equivalents	₩ -	₩ 737,413	₩ -	₩ -	₩ 737,413
Derivative assets	-	-	-	4,433	4,433
Loans and receivables	-	5,164	-	-	5,164
Short-term financial instruments	-	30,000	-	-	30,000
Other financial assets	-	163,300	-	-	163,300
	-	935,877	-	4,433	940,310
Trade and other receivables	-	234,038	-	-	234,038
	₩ -	₩ 1,169,915	₩ -	₩ 4,433	₩ 1,174,348

	December 31, 2019				
	Financial assets at FVPL	Financial assets at amortized cost	Financial assets at FVOCI	Fair value hedge financial assets	Total
Non-current financial assets:					
Derivative assets	₩ -	₩ -	₩ -	₩ 51,376	₩ 51,376
Financial assets at FVPL	49,338	-	-	-	49,338
Financial assets at FVOCI	-	-	21,803	-	21,803
Loans and receivables	-	27,619	-	-	27,619
	49,338	27,619	21,803	51,376	150,137
Trade and other receivables	-	102,762	-	-	102,762
	₩ 49,338	₩ 130,381	₩ 21,803	₩ 51,376	₩ 252,899

37. Financial instruments by category (cont'd)

	December 31, 2019			
	Financial liabilities at FVPL	Financial liabilities at amortized cost	Fair value hedge financial liabilities	Total
Current financial liabilities:				
Bonds	₩ -	₩ 2,922,839	₩ -	₩ 2,922,839
Derivative liabilities	-	-	2,331	2,331
	-	2,922,839	2,331	2,925,170
Trade and other payables	-	894,539	-	894,539
	₩ -	₩ 3,817,377	₩ 2,331	₩ 3,819,708

	December 31, 2019			
	Financial liabilities at FVPL	Financial liabilities at amortized cost	Fair value hedge financial liabilities	Total
Non-current financial liabilities:				
Financial liabilities at FVPL	₩ 122,647	₩ -	₩ -	₩ 122,647
Long-term borrowings	-	900,000	-	900,000
Bonds	-	23,039,018	-	23,039,018
Derivative liabilities	-	-	70,975	70,975
	122,647	23,939,018	70,975	24,132,640
Trade and other payables	-	591,626	-	591,626
	₩ 122,647	₩ 24,530,644	₩ 70,975	₩ 24,724,266

Gain and loss on financial instruments by category for years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Financial assets at fair value through profit or loss:		
Gain (loss) on valuation, net	₩ (11,909)	₩ 8,038
Gain (loss) on transaction, net	2,840	-
Dividends	161	28
Amortized cost of a financial asset or financial assets:		
Interest income	9,858	9,648
Financial assets at fair value other comprehensive income:		
Comprehensive income (loss)	(262)	331
Derivatives designated as hedge:		
Loss on transaction, net	(3,520)	-
Gain (loss) on valuation, net	2,701	58,665
Comprehensive income	13,897	4,707
Financial liabilities at fair value through profit or loss		
Interest expenses (*)	(1,267)	2,832
Gain (loss) on transaction, net	(2,828)	-
Gain (loss) on valuation, net	13,303	2,272
Other financial liabilities measured at amortized cost:		
Interest expenses (*)	(624,874)	719,709
Gain (loss) on transaction, net	7	-
Gain (loss) on foreign currency transactions, net	3,520	(12,359)
Gain (loss) on foreign currency translations, net	102,339	(77,212)
Derivative liabilities designated as hedge:		
Gain (loss) on transaction, net	-	12,359
Gain (loss) on valuation, net	(108,410)	16,367
Comprehensive income (loss)	48,398	21,709

(*) Amount after deducting the capitalization of borrowing costs.

38. Risk management

Risk management policy

The Group manages various risks that may arise from each field of business, and main risks are credit risk, market risk, interest risk and liquidity risk. These risks are recognized, measured and reported according to the basic policies established by the Group.

Capital risk management

The Group's capital management purpose is to maintain a strong capital base, so as to maintain investor, creditor and market confidence, and to sustain future development of the business. The Group's capital management is to maintain as a going concern and minimize the cost of capital, so as to maximize shareholder's return. The management of the Group also monitors periodically the level of capital structure and maintains the optimal capital structure.

The Group manages its capital based on debt-to-equity ratio. The debt-to-equity ratio is calculated by dividing net debt by total equity. Net debt are total borrowings less cash and cash equivalents, and total equity is the "equity" in the consolidated statement of financial position plus net debt.

The Group's strategy for 2020, which is line with 2019, is to maintain its debt-to-equity ratio between 45% and 50% and its credit rating at AAA (domestic credit rating). Its credit rating was maintained for 2020.

As of December 31, 2020 and 2019, debt-to-equity ratio is as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Total borrowings	₩ 28,912,582	₩ 26,973,183
Less: cash and cash equivalents	(508,280)	(737,413)
Net debt	28,404,302	26,235,769
Total equity	38,021,720	36,327,777
	66,426,022	62,563,546
Net debt-to-equity ratio	₩ 42.76%	₩ 41.93%

Financial risk management

1) Purpose of financial risk management

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework. The Board of Directors has established the Risk Management Committee, which is responsible for developing and monitoring the Group's risk management policies. The committee reports regularly to the Board of Directors on its activities.

The Group's risk management policies are established to identify and analyze the risks faced by the Group, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Group's Audit Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group. The Group's Audit Committee is assisted in its oversight role by Internal Audit. Internal Audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Audit Committee

38. Risk management (Cont'd)

2) Credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk as of December 31, 2020 and 2019, are as follows (Korean won in millions):

	December 31, 2020	December 31, 2019
Financial assets at fair value through profit or loss	₩ 52,070	₩ 49,338
Financial asstes at fair value through other comprehensive income	21,601	21,803
Loans and receivables	807,794	562,883
Cash and cash equivalents	508,280	737,413
Interest rate swap for hedge	10,248	12,085
Currency swap for hedge	41,987	43,724
	₩ 1,441,980	₩ 1,427,247

Impairment loss

Allowance for doubtful accounts is used to record impairment loss before the Group can have assurance of uncollectable of assets. If the Group determined that assets cannot be recovered, allowance for doubtful accounts is offset with financial assets. Impairment analysis of trade and other receivables are described in Note 8.

3) Liquidity risk

The contractual maturities of financial liabilities as of December 31, 2020 and 2019, excluding the impact of netting agreements, are as follows. Meanwhile, derivative liabilities were excluded because they were presented separately (Korean won in millions):

	December 31, 2020						
	Carrying amount	Contractual cash flow	Within 6 months	6–12 months	1 year–2 years	2–5 years	More than 5 years
Non-derivative financial liabilities:	₩	₩	₩	₩	₩	₩	₩
Trade and other payables	984,964	999,609	555,877	225,484	93,274	124,974	-
Unsecured bonds	27,912,582	27,919,302	1,077,048	1,776,400	3,098,636	8,311,649	13,655,569
Unsecured long-term borrowings	1,000,000	1,000,000	-	300,000	200,000	500,000	-
	₩ 29,897,546	₩ 29,918,911	₩ 1,632,925	₩ 2,301,884	₩ 3,391,910	₩ 8,936,623	₩ 13,655,569

	December 31, 2019						
	Carrying amount	Contractual cash flow	Within 6 months	6–12 Months	1 year–2 years	2–5 years	More than 5 years
Non-derivative financial liabilities:	₩	₩	₩	₩	₩	₩	₩
Trade and other payables	1,486,165	1,513,223	670,189	225,954	179,222	437,858	-
Unsecured bonds	26,073,183	26,080,606	1,293,120	1,630,000	2,742,802	7,347,078	13,067,606
Unsecured long-term borrowings	900,000	900,000	-	-	300,000	600,000	-
	₩ 28,459,348	₩ 28,493,829	₩ 1,963,309	₩ 1,855,954	₩ 3,222,024	₩ 8,384,936	₩ 13,067,606

It is not expected that the cash flows included in the maturity analysis could occur significantly earlier or at significantly different amounts.

38. Risk management (Cont'd)

The periods in which the cash flows associated with cash flow hedges are expected to occur as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020						
	Carrying amount	Contractual cash flow	Within 6 months	6–12 months	1 year–2 years	2–5 years	More than 5 years
Currency swap:							
Assets	₩ 41,987	₩ 41,987	5,058	₩ -	₩ -	₩ 24,360	₩ 12,569
Liabilities	(86,713)	(86,713)	-	(7,851)	(39,809)	(21,337)	(17,715)
Interest rate swap:							
Assets	20,059	20,059	-	-	10,345	4,636	5,079
Liabilities	₩ (143,780)	₩ (143,780)	₩ -	₩ (1,855)	₩ (117,082)	₩ (18,048)	₩ (6,796)

	December 31, 2019						
	Carrying amount	Contractual cash flow	Within 6 months	6–12 months	1 year–2 years	2–5 years	More than 5 years
Currency swap:							
Assets	₩ 43,724	₩ 43,724	4,433	₩ -	₩ 17,800	₩ 19,027	₩ 2,464
Liabilities	(26,498)	(26,498)	-	-	-	(9,376)	(17,122)
Interest rate swap:							
Assets	16,004	16,004	-	-	142	12,712	3,151
Liabilities	₩ (169,456)	₩ (169,456)	₩ -	₩ (2,331)	₩ (1,370)	₩ (26,643)	₩ (27,785)

4) Currency risk

Exposure to currency risk

The Group's exposure to foreign currency risk as of December 31, 2020 and 2019, is as follows (Korean won in millions):

	December 31, 2020							
	USD	EUR	HKD	CHF	CHN	SEK	CAD	AUD
Liabilities:								
Bonds	₩ 1,436,160	₩ 91,000	₩ 175,718	₩ 283,896	₩ 217,048	₩ 95,954	₩ 115,196	₩ 376,452

	December 31, 2019						
	USD	EUR	HKD	CHF	CHN	SEK	CAD
Liabilities:							
Bonds	₩ 1,875,636	₩ 88,225	₩ 186,122	₩ 274,970	₩ 215,462	₩ 89,179	₩ 119,686

Exchange rates applied as of and for the years ended December 31, 2020 and 2019 are as follows (Korean won):

	Average rate		Reporting date spot rate	
	2020	2019	December 31, 2020	December 31, 2019
USD	₩ 1,082.70	₩ 1,165.65	₩ 1,088.00	₩ 1,157.80
EUR	1,345.99	1,304.81	1,338.24	1,297.43
HKD	152.14	148.78	140.35	148.66
CHF	1,257.34	1,173.43	1,234.33	1,195.52
CNH	170.88	168.58	166.96	165.74
SEK	128.42	123.28	132.77	123.86
CAD	879.91	878.54	853.30	886.56
AUD	813.48	-	836.56	-

38. Risk management (Cont'd)

Sensitivity analysis

If the foreign exchange rate against the Korean won was high as of December 31, 2020 and 2019, the Group's equity and profit and loss would have fluctuated. This analysis assumes a change in the degree to which the group believes it is reasonably possible at the end of each term. In addition, it was assumed that other variables, such as interest rates, do not change when analyzing sensitivity. Specific equity and profit or loss variability effects, when the exchange rate increase 10% are as follows:

	December 31, 2020				December 31, 2019			
	Equity		Profit or loss		Equity		Profit or loss	
USD	₩	(143,616)	₩	(143,616)	₩	(187,564)	₩	(187,564)
EUR		(9,100)		(9,100)		(8,823)		(8,823)
HKD		(17,572)		(17,572)		(18,612)		(18,612)
CHF		(28,390)		(28,390)		(27,497)		(27,497)
CNH		(21,705)		(21,705)		(21,546)		(21,546)
SEK		(9,559)		(9,559)		(8,918)		(8,918)
CAD		(11,520)		(11,520)		(11,969)		(11,969)
AUD		(37,645)		(37,645)		-		-

5) Interest rate risk

The Group's interest-bearing financial liabilities as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		December 31, 2019	
Fixed-rate instruments:				
Financial liabilities	₩	28,552,615	₩	25,720,654
Variable-rate instruments:				
Financial liabilities	₩	359,967	₩	359,952

Cash flow sensitivity analysis for variable-rate instruments

A change of 100 basis points ("bps") in interest rates as of December 31, 2020 and 2019 would have increased (decreased) equity and profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for 2019 (Korean won in millions):

	Profit or loss				Equity			
	100 bp increase		100 bp decrease		100 bp increase		100 bp decrease	
As of December 31, 2020:								
Variable-rate instruments	₩	(3,600)	₩	3,600	₩	(3,600)	₩	3,600
As of December 31, 2019:								
Variable-rate instruments	₩	(3,600)	₩	3,600	₩	(3,600)	₩	3,600

6) Major assets and liabilities with uncertainties in underlying assumptions

A sensitivity analysis on the Group's defined benefit obligation assuming a 1% increase or 1% decrease in various assumptions as of December 31, 2020 and 2019, are as follows (Korean won in millions):

		December 31, 2020				December 31, 2019			
Assumptions	Accounts	1% increase		1% decrease		1% increase		1% decrease	
Future salary increases	Defined benefit obligation	₩	(27,259)	₩	31,872	₩	(21,944)	₩	25,214
Discount rate	Defined benefit obligation		31,803		(27,709)		25,267		(21,588)

38. Risk management (cont'd)

Fair value measurements

The fair value of financial instruments traded in active markets is calculated based on the notified market price at the end of the reporting period. Published market prices of financial assets that the Group retains are bid prices.

The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group uses a variety of assessment techniques and establishes a hypothesis based on current market conditions at the end of the reporting period

The Group's fair value assessment techniques are using recent transactions between independent parties that have reasonable judgement and willingness to deal with, referring the other financial instrument's present value that is substantially equal, discounting estimated cash flow method, option-pricing model, etc. For example, the fair value of interest rate swaps is calculated as the present value of estimated future cash flows, and the fair value of foreign exchange forward contracts is calculated by applying notice forward rate at the end of the reporting period.

- Debt instruments, including bonds

The fair value of debt instruments, such as corporate bonds, has been determined by applying the discounted cash flow method. The discount rate used to discount cash flows was determined by swap rate and credit spreads as a base that are published in market for debenture having similar credit rating and period like fair value measurement debt instruments, including bonds. As the inputs of the discount rate have a significant impact on the fair value of debt instruments, including bonds derived on the basis of the available information observed in the market, the Group has classified the fair value measurement of debt instruments, including bonds, in the Level 2 of the fair value hierarchy.

- Unmarketable shares

The fair value of unlisted shares is measured using cash flow discount model in order to estimate the future cash flows business plans and sales growth based on the industry situation and pretax operating margin using assumptions that are not based on observable market price or percentage of such weighted-average cost of capital assumption or estimations. The weighted-average cost of capital used to discount the future cash flow was estimated by utilizing the data of similar listed companies applying the capital asset pricing model. The Group has determined that as major assumptions and estimates mentioned above have a significant impact on the fair value of unlisted shares, the Group classifies the fair value measurement of unlisted shares in the three-level fair value hierarchy.

1) Fair values versus carrying amount

The fair values of financial assets and liabilities, together with the carrying amounts shown in the consolidated statements of financial position, as of December 31, 2020 and 2019 are as follows (Korean won in millions):

	December 31, 2020		December 31, 2019	
	Carrying amount	Fair value	Carrying amount	Fair value
Assets carried at fair value:				
Current derivative financial assets	₩ 5,058	₩ 5,058	₩ 4,433	₩ 4,433
Non-current financial assets at FVPL	52,070	52,070	49,338	49,338
Non-current derivative financial assets	21,601	21,601	51,376	51,376
Non-current financial assets at FVOCI	47,177	47,177	21,803	21,803
	₩ 125,906	₩ 125,906	₩ 126,950	₩ 126,950

38. Risk management (cont'd)

Assets carried at amortized cost:								
Cash and cash equivalents	₩	508,280	₩	508,280	₩	737,413	₩	737,413
Short-term financial instruments		45,000		45,000		30,000		30,000
Short-term loans and receivables		6,775		6,775		5,164		5,164
Current other financial assets		323,468		323,468		163,300		163,300
Trade and other receivables		297,385		297,385		234,038		234,038
Long-term loans and receivables		25,932		25,932		27,619		27,619
Long-term trade and other receivables		109,235		109,235		102,762		102,762
	₩	1,316,07	₩	1,316,075	₩	1,300,297	₩	1,300,297
Liabilities carried at fair value:								
Current derivative financial liabilities	₩	9,706	₩	9,706	₩	2,331	₩	2,331
Non-current financial liabilities at FVPL		113,827		113,827		122,647		122,647
Non-current derivative financial liabilities		106,960		106,960		70,975		70,975
	₩	230,493	₩	230,493	₩	195,953	₩	195,953
Liabilities carried at amortized cost:								
Trade and other payables	₩	780,849	₩	780,849	₩	894,539	₩	894,539
Current portion of long-term borrowings		300,000		300,000		-		-
Current portion of bonds		2,852,760		2,852,760		2,922,839		2,922,839
Long-term trade and other payables		204,114		204,114		591,626		591,626
Long-term borrowings		700,000		700,000		900,000		900,000
Bonds		24,951,584		24,951,584		23,039,018		23,039,018
	₩	29,789,307	₩	29,789,307	₩	28,348,021	₩	28,348,021

2) Fair value hierarchy

The different levels of fair values of financial assets and liabilities have been defined as follows:

- ✓ Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- ✓ Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)
- ✓ Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

38. Risk management (Cont'd)

Financial instruments that are measured subsequent to initial recognition at fair value by fair value hierarchy levels as of December 31, 2020 and December 31, 2019 are as follows (Korean won in millions):

	December 31, 2020			
	Level 1	Level 2	Level 3	Total
Non-current financial assets at FVOCI	₩ -	₩	₩ 21,601	₩ 21,601
Non-current financial assets at FVPL	-	9,811	42,258	52,069
Current derivative financial assets	-	5,058		5,058
Non-current derivative financial assets	-	47,177	-	47,177
Non-current financial liabilities at FVPL	-	113,827	-	113,827
Current derivative financial liabilities	-	9,706	-	9,706
Non-current derivative financial liabilities	-	106,960	-	106,960

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Non-current financial assets at FVOCI	₩ –	₩ -	₩ 21,803	₩ 21,803
Non-current financial assets at FVPL	–	3,920	45,419	49,338
Current derivative financial assets	–	4,433	-	4,433
Non-current derivative financial assets	–	51,376	-	51,376
Non-current financial liabilities at FVPL	–	122,647	-	122,647
Current derivative financial liabilities	–	2,331	-	2,331
Non-current derivative financial liabilities	–	70,975	-	70,975

The method used for the valuation of financial assets at FVPL and financial assets at FVOCI measured at fair value as of December 31, 2020 is as follows:

① Assumption (Korean won in millions)

	Valuation method	Discount rate
Seoul-Choonchun Highway	Discounted cash flow method	14.10%
2nd Gyeongin Highway	Dividend Discount method	11.45%
Seoul Bukbu Highway	Discounted cash flow method	10.90%
DREAMLINE Corporation	Discounted cash flow method	11.78%
Korea Overseas Infrastructure & Urban Development Corporation	Net Asset Value Evaluation Method	-

② Method (Korean won in millions)

	Book value before valuation	Valuation gain (before tax)	Book value	Fair value
Seoul-Choonchun Highway	24,807	(10,105)	14,701	14,701
2nd Gyeongin Highway	4,440	(1,085)	3,355	3,355
Seoul Bukbu Highway	6,087	(1,562)	4,525	4,525
DREAMLINE Corporation	1,153	(208)	946	946
Korea Overseas Infrastructure & Urban Development Corporation	20,645	(54)	20,591	20,591

39. Related-party transactions

Details of the Group's related parties as of December 31, 2020 are as follows:

	Name
Parent company	Ministry of Land, Infrastructure and Transport
Associates companies	Korea Construction Management Corp.
	Expressway Solar Power Co., Ltd.
	Highwaysolar Co., Ltd.
Joint venture	Busan-Ulsan Expressway Co., Ltd.

Transactions with related parties for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

Related parties	Transactions	2020	2019
Busan-Ulsan Expressway Co., Ltd.	Sales	₩ 21,536	₩ 19,966
	Cost of sales	3,734	3,385
Expressway Solar Power Co., Ltd.	Sales	1,332	1,328
Highway Solar Co., Ltd.	Sales	1,090	979

Receivables and payables with related parties as of December 31, 2020 and 2019, are as follows (Korean won in millions):

Related parties	Receivables and Payables	December 31, 2020	December 31, 2019
Busan-Ulsan Expressway Co., Ltd.	Other accounts receivable	₩ 11	₩ 13
	Other accounts payable	103	170
Korea Construction Management Corporation	Other accounts payable	705	914
Expressway Solar Power Co., Ltd.	Other accounts receivable	28	28
Highway Solar Co., Ltd.	Other accounts receivable	24	24

There has been no impairment loss on receivables above with related parties for the years ended December 31, 2020 and 2019.

The Government of the Republic of Korea (Ministry of Land, Infrastructure and Transport and Ministry of Economy and Finance) controls the Group and participated in the capital increase of ₩1,662,319 million and ₩1,448,009 million for the years period ended December 31, 2020 and 2019, respectively.

Details of key management personnel compensation for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Salaries	₩ 982	₩ 1,007
Severance and retirement benefits	37	91
	₩ 1,019	₩ 1,098

40. Consolidated statements of cash flows

Significant non-cash investing activities and financing activities for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020	2019
Reclassification of long-term borrowings to current portion	₩ 300,000	₩ -
Reclassification of bonds to current portion	2,853,448	2,923,120
Reclassification of construction-in-progress (property, plant and equipment)	167,229	10,830
Reclassification of construction-in-progress (investment properties)	83,429	3,998
Reclassification of intangible assets under development	3,016,715	200,919
Reclassification of short-term leasehold deposits to long-term leasehold deposits	133,830	-

Changes in liabilities arising from financing activities for the years ended December 31, 2020 and 2019 are as follows (Korean won in millions):

	2020					
			Non-cash changes			
	Beginning balance	Cash flows	Transfer	Changes in exchange rate	Others	Ending balance
Current portion of long-term borrowings	₩ -	₩ -	₩ 300,000	₩ -	₩ -	₩ 300,000
Current portion of bonds	2,922,839	(2,923,108)	2,852,760	-	269	2,852,760
Current lease liabilities	1,411	(4,096)	6,309	-	-	3,624
Long-term borrowings	900,000	100,000	(300,000)	-	-	700,000
Bonds	23,039,018	4,865,435	(2,852,760)	(102,339)	2,230	24,951,584
Non-current lease liabilities	1,787	-	(6,309)	-	7,031	2,509
	₩ 26,865,055	₩ 2,038,231	₩ -	₩ (102,339)	₩ 9,530	₩ 28,810,477

	2019					
			Non-cash changes			
	Beginning balance	Cash flows	Transfer	Changes in exchange rate	Others	Ending balance
Current portion of long-term borrowings	₩ 100,000	₩ (100,000)	₩ -	₩ -	₩ -	₩ -
Current portion of bonds	2,878,205	(2,878,349)	2,922,839	-	144	2,922,839
Current lease liabilities		(3,341)	-	-	4,752	1,411
Long-term borrowings	900,000	-	-	-	-	900,000
Bonds	21,972,540	3,909,599	(2,922,839)	77,212	2,505	23,039,018
Non-current lease liabilities	-	-	-	-	1,787	1,787
	₩ 25,850,744	₩ 927,910	₩ -	₩ 77,212	₩ 9,188	₩ 26,865,055

41. Contingent liabilities and assets

Details of the Group's major pending lawsuits involved in as a defendant as of December 31, 2020 are as follows (Korean won in millions):

Court	Details	Litigation amount	Progress
Seoul Central District Court	Claims for payment	18,325	1st trial
Seoul Central District Court	Claims for payment	15,925	1st trial
Seoul Central District Court	Claims for reimbursement	15,241	2st trial
		₩ 49,491	

41. Contingent liabilities and assets (cont'd)

As of December 31, 2020, including the above litigation, there were a total of 415 litigations pending by the Group as defendants (Litigation amount: ₩836,208 million). Except for a recognized provision of ₩592,735 million, no other provision was recognized as the Group was not able to reasonably estimate the results of the lawsuits and their impacts on the consolidated financial statements as of December 31, 2020.

Significant agreements with financial institutions as of December 31, 2020 are as follows (Korean won in millions):

Financial institutions	Commitments	Limits	Amounts outstanding
KEB Hana Bank	Working capital loan	₩ 200,000	₩ -
	Bill acceptance	1,000,000	1,000,000
Kookmin Bank	General loan	80,000	-

As of December 31, 2020, Seoul Guarantee Insurance provides performance guarantees of ₩62,250 million to the Group.

As of December 31, 2020, except for providing shares in a joint venture as collaterals (described in Note 13), the Group has not provided any guarantees to the third parties.

42. Authorization for issue

The Group's consolidated financial statements were authorized for issue at the Board of Directors' meeting on March 5, 2021 and are to be authorized for issue finally at the general meeting of shareholders on March 25, 2021.

43. Uncertainty of the impact of COVID-19

In order to prevent the spread of COVID-19, a various prevention and control measures, including restrictions on traveling are being implemented worldwide, and as a result, the global economy has been extensively affected. In addition, governments are implementing various support measures to address COVID-19.

The Group prepared its consolidated financial statements considering the impact of COVID-19 and government supporting measures on the Group's consolidated financial statements in future periods. However, due to the uncertainties relating to the duration and ultimate impact of COVID-19, the Group was unable to reasonably estimate the impact of COVID-19 on its consolidated financial statements.

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