

## IMPORTANT NOTICE

**THIS OFFERING IS AVAILABLE ONLY TO INVESTORS WHO ARE EITHER (I) QIBS (AS DEFINED BELOW) OR (II) OUTSIDE THE UNITED STATES IN ACCORDANCE WITH REGULATION S (AS DEFINED BELOW).**

**You must read the following disclaimer before continuing:** The following disclaimer applies to the attached offering circular (the “offering circular”). You are therefore advised to read this disclaimer carefully and in full before reading, accessing or making any other use of the attached offering circular. In accessing the attached offering circular, you agree to be bound by the following terms and conditions, including any modifications to them from time to time, each time you receive any information from us as a result of such access.

**Confirmation of your representation:** You have accessed the attached document on the basis that you have confirmed your representation to Citigroup Global Markets Inc., The Korea Development Bank, Merrill Lynch International, Morgan Stanley & Co. International plc and Standard Chartered Bank (each an “Initial Purchaser”) that (i) either (a) you are outside the United States and, to the extent you purchase the Notes, as defined and described in the attached offering circular, you will be doing so pursuant to Regulation S under the US Securities Act of 1933, as amended (the “Securities Act”) or (b) you are acting on behalf of, or you are, a qualified institutional buyer (“QIB”), as defined in Rule 144A under the Securities Act, and (ii) you consent to delivery of the attached offering circular and any amendments or supplements thereto by electronic transmission.

The attached offering circular has been made available to you in electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of transmission and consequently neither the Initial Purchasers nor any of their respective directors, officers, employees, representatives, agents or affiliates accepts any liability or responsibility whatsoever in respect of any discrepancies between the document distributed to you in electronic format and the hard copy version. We will provide a hard copy version to you upon request.

Prospective purchasers that are QIBs are hereby notified that the seller of the Notes described in the offering circular will be relying on the exemption from the provisions of Section 5 of the Securities Act pursuant to Rule 144A.

**NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER OF THE NOTES FOR SALE IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO. THE NOTES HAVE NOT BEEN, AND WILL NOT BE, REGISTERED UNDER THE SECURITIES ACT, OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR OTHER JURISDICTIONS, AND THE NOTES 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.**

Except with respect to eligible investors in jurisdictions where such offer is permitted by law, nothing in this electronic transmission constitutes an offer or an invitation by or on behalf of LG Energy Solution, Ltd. or the Initial Purchasers to subscribe for or purchase any of the Notes described therein, and access has been limited so that it shall not constitute a general advertisement or general solicitation (as those terms are used in Regulation D under the Securities Act) or directed selling efforts (within the meaning of Regulation S under the Securities Act) in the United States or elsewhere.

The attached offering circular does 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 of the Notes be made by a licensed broker or dealer and any Initial Purchaser or any affiliate of an Initial Purchaser, licensed brokers or dealers in that jurisdiction, the offering of any of the Notes shall be deemed to be made by such Initial Purchaser or such affiliate on behalf of LG Energy Solution, Ltd. in such jurisdiction.

You are reminded that you have accessed the attached offering circular on the basis that you are a person into whose possession this offering circular 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 forward this document, electronically or otherwise, to any other person. If you have gained access to this transmission contrary to the foregoing restrictions, you will be unable to purchase any of the Notes described therein.

**Actions that you may not take:** You should not reply by e-mail to this announcement, and you may not purchase any Notes by doing so. Any reply by e-mail communication, including those you generate by using the “Reply” function on your e-mail software, will be ignored and/or rejected.

**THE ATTACHED OFFERING CIRCULAR 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 NOTES DESCRIBED IN THE ATTACHED OFFERING CIRCULAR.**

**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.



**LG ENERGY SOLUTION, LTD.**

*(Incorporated with limited liability under the laws of the Republic of Korea.)*

**U.S.\$400,000,000 5.625% Senior Unsecured Green Notes due 2026**

**U.S.\$600,000,000 5.750% Senior Unsecured Green Notes due 2028**

The U.S.\$400,000,000 5.625% senior unsecured green notes due 2026 (the “2026 Notes”) of LG Energy Solution, Ltd. (the “Company,” “we” or “us”) will mature on September 25, 2026 and the U.S.\$600,000,000 5.750% senior unsecured green notes due 2028 (the “2028 Notes,” and together with the 2026 Notes, the “Notes”) of the Company will mature on September 25, 2028. The 2026 Notes will bear interest at the rate of 5.625% per annum and the 2028 Notes will bear interest at the rate of 5.750% per annum. Interest on the Notes will be payable in arrears on March 25 and September 25 of each year, commencing March 25, 2024. We may, at our option, redeem all, but not some only, of the Notes at any time at their principal amount plus accrued interest in the event of certain changes in tax law as described under “Terms and Conditions of the Notes—Optional Redemption Due to Changes in Tax Treatment.”

The Notes will constitute our direct, unconditional, unsubordinated and unsecured obligations and will at all times rank *pari passu* and without any preference or priority among themselves and with all of our other present and future direct, unconditional, unsubordinated and unsecured obligations, except as may be required by mandatory provisions of law.

The Notes are being issued as “Green Bonds” under the Company’s Green Financing Framework dated February 2023. See “Use of Proceeds.”

The Notes are expected to be rated “Baa1” by Moody’s Investor Services, Inc. (“Moody’s”) and “BBB+” by S&P Global Ratings, a division of S&P Global, Inc. (“S&P”). A rating is not a recommendation to buy, sell or hold securities and may be subject to revision, suspension or withdrawal at any time by the assigning rating organization.

Application will be made to the Singapore Exchange Securities Trading Limited (the “Singapore Stock Exchange”) for the listing and quotation of the Notes 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 in this offering circular. Approval in-principle from, admission to the Official List of, and the listing and quotation of the Notes on, the Singapore Stock Exchange are not to be taken as an indication of the merits of the Notes or the Company. There is currently no public market for the Notes.

The Notes will be issued in registered form in minimum denominations of U.S.\$200,000 and integral multiples of U.S.\$1,000 in excess thereof. The Notes will be represented on issuance by one or more global notes registered in the name of a nominee of The Depository Trust Company (“DTC”), as depository. It is expected that delivery of the Notes will be made through the book-entry facilities of DTC on or about September 25, 2023.

The Notes 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 other jurisdiction, and may not be offered or sold within the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act. Accordingly, the Notes are being offered and sold only (i) to qualified institutional buyers in reliance on the exemption from the registration requirements of the Securities Act provided by Rule 144A thereunder (“Rule 144A”) and (ii) outside the United States in compliance with Regulation S under the Securities Act (“Regulation S”). Prospective purchasers are hereby notified that the seller of the Notes may be relying on the exemption from the provisions of Section 5 of the Securities Act provided by Rule 144A. For a description of certain restrictions on resale or transfer, see “Transfer Restrictions.”

See “Risk Factors” beginning on page 9 to read about certain risk factors you should consider before investing in the Notes.

**Issue Price:**

**2026 Notes: 99.693%**

**2028 Notes: 99.914%**

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***Joint Bookrunners and Joint Lead Managers***

**BofA Securities**

**Citigroup**

**Korea Development Bank**

**Morgan Stanley**

**Standard Chartered Bank**

The date of this offering circular is September 18, 2023.

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You should rely only on the information contained in this offering circular. Neither we nor any of the Initial Purchasers (as defined in “Plan of Distribution”) has authorized any person to provide you with information or make a representation that is inconsistent with or not contained in this offering circular and, if given or made, such information or representation must not be relied upon as having been authorized by us or any of the Initial Purchasers. This document may only be used where it is legal to offer and sell these Notes. The information in this document may only be accurate as of the date of this offering circular.

We, having made all reasonable inquiries, confirm that this offering circular contains all information with respect to us and the Notes which is material in the context of the issue and offering of the Notes (the “Offering”), that the information contained in this offering circular 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 circular are honestly held and have been reached after considering all relevant circumstances and are based on reasonable assumptions, and that there are no other facts, the omission of which would, in the context of the Offering, make this offering circular as a whole or any information or the expression of any opinions or intentions expressed in this offering circular misleading in any material respect. We accept responsibility accordingly.

No representation, warranty or undertaking, express or implied, is made and no responsibility or liability is accepted by any of the Initial Purchasers as to the accuracy or completeness of the information contained in this offering circular or any other information provided by us in connection with the Offering or the Notes or their distribution or for any other statement made or purported to be made by any Initial Purchaser on its behalf in connection with us or the Offering. Each Initial Purchaser accordingly disclaims any and all responsibility or liability whether arising in tort or contract or otherwise which it might otherwise have in respect of the information contained in this offering circular, any other information provided by us in connection with the Offering or any other such statement.

This offering circular has been confidentially submitted to a limited number of investors for them to consider an investment in the Notes. See “Plan of Distribution.” We have not authorized its use for any other purpose. This offering circular may not be copied or reproduced in whole or in part. This offering circular may not be distributed, nor may its contents be disclosed, except to the prospective investors to whom it is provided. By accepting delivery of this offering circular, each investor agrees to all of these restrictions. Notwithstanding anything to the contrary contained in this offering circular, we, the Initial Purchasers and each investor (and each of their respective employees, representatives, or other agents, as applicable) may disclose to any and all persons, without limitations of any kind, the tax treatment and tax structure of the transaction (including any materials, opinions or analyses relating to such tax treatment or tax structure), provided, however, that we, the Initial Purchasers and each investor (and each of their respective employees, representatives, or other agents, as applicable) will not disclose any information that is not necessary to understand the tax treatment and tax structure of the transaction (including the identity of our company, the Initial Purchasers or any investor and any information that could lead another to determine the identity of our company, the Initial Purchasers or any investor), or any other information to the extent that such disclosure could result in a violation of any U.S. federal or state securities law.

Neither this offering circular nor any other information supplied in connection with the Offering or any Notes (a) is intended to provide the basis of any credit or other evaluation or (b) should be considered as a recommendation by us or any of the Initial Purchasers that any recipient of this offering circular or any other information supplied in connection with the Offering or any Notes should purchase any Notes. Each investor contemplating purchasing any Notes should make its own independent investigation of our financial condition and affairs and its own appraisal of our creditworthiness and the terms of the Notes, including the merits and risks involved.

Neither the delivery of this offering circular nor any sale made in connection with this offering circular shall under any circumstances imply that the information in this offering circular is correct as of any date subsequent to the date of this offering circular or constitute a representation that there has been no change or development reasonably likely to involve a material adverse change in our affairs since the date of this offering circular.

This offering circular 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 circular and the offer or sale of the Notes may be restricted by law in certain jurisdictions. We and the Initial Purchasers do not represent that this offering circular 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 us or the Initial Purchasers that 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 circular 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 circular or any Notes may come must inform themselves about, and observe, any such restrictions on the distribution of this offering circular and the offering and sale of the Notes. In particular, there are restrictions on the distribution of this offering circular and the offer or sale of Notes in the European Economic Area, the United States, the United Kingdom, Korea, Japan, Hong Kong, Singapore, Italy and Switzerland. See “Plan of Distribution” and “Transfer Restrictions.”

The Notes have not been approved or disapproved by the U.S. 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 circular or confirmed the accuracy or determined the adequacy of the information contained in this offering circular. Any representation to the contrary is unlawful.

UK MIFIR product governance/Professional investors and ECPs only target market – Solely for the purposes of the 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 (“COBS”), and professional clients, as defined in Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (“UK MiFIR”); 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 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 manufacturer’s target market assessment) and determining appropriate distribution channels.

### **Important Notice to Prospective Investors**

Prospective investors should be aware that certain intermediaries in the context of this Offering, including all of the Initial Purchasers, are “capital market intermediaries” (“CMIs”) subject to Paragraph 21 of the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission (the “SFC Code”). This notice to prospective investors is a summary of certain obligations the SFC Code imposes on such CMIs, which require the attention and cooperation of prospective investors. Certain CMIs may also be acting as “overall coordinators” (“OCs”) for this offering and are subject to additional requirements under the SFC Code.

Prospective investors who are the directors, employees or major shareholders of the Company, a CMI or its group companies would be considered under the SFC Code as having an association (“Association”) with the Company, the CMI or the relevant group company. Prospective investors associated with the Company or any CMI (including its group companies) should specifically disclose this when placing an order for the Notes and should disclose, at the same time, if such orders may negatively impact the price discovery process in relation to this offering. Prospective investors who do not disclose their Associations are hereby deemed not to be so associated. Where prospective investors disclose their Associations but do not disclose that such order may negatively impact the price discovery process in relation to this offering, such order is hereby deemed not to negatively impact the price discovery process in relation to this offering.

Prospective investors should ensure, and by placing an order, prospective investors are deemed to confirm, that orders placed are bona fide, are not inflated and do not constitute duplicated orders (i.e. two or more corresponding or identical orders placed via two or more CMIs). If a prospective investor is an asset management arm affiliated with any Initial Purchaser, such prospective investor should so indicate when placing an order if it is for a fund or portfolio where the Initial Purchaser or its group company has more than 50% interest, in which case it will be classified as a “proprietary order” and subject to appropriate handling by CMIs in accordance with the SFC Code and should disclose, at the same time, if such “proprietary order” may negatively impact the price discovery process in relation to this offering. Prospective investors who do not indicate this information when placing an order are hereby deemed to confirm that their order is not a “proprietary order.” If a prospective investor is otherwise affiliated with any Initial Purchaser, such that its order may be considered to be a “proprietary order” (pursuant to the SFC Code), such prospective investor should so indicate to the relevant Initial Purchaser when placing such order. Prospective investors who do not indicate this information when placing an order are hereby deemed to confirm that their order is not a “proprietary order.” Where prospective investors disclose such information but do not disclose that such “proprietary order” may negatively impact the price discovery process in relation to this offering, such “proprietary order” is hereby deemed not to negatively impact the price discovery process in relation to this offering.

Prospective investors should be aware that certain information may be disclosed by CMIs (including private banks) which is personal and/or confidential in nature to the prospective investor. By placing an order, prospective investors are deemed to have understood and consented to the collection, disclosure, use and transfer of such information by the Initial Purchasers and/or any other third parties as may be required by the SFC Code, including to the Company, any OCs, relevant regulators and/or any other third parties as may be required by the SFC Code, it being understood and agreed that such information shall only be used for the purpose of complying with the SFC Code, during the bookbuilding process for this offering. Failure to provide such information may result in that order being rejected.

**Notification under Section 309B(1)(c) of the Securities and Futures Act 2001 of Singapore (the “SFA”)** – the Company 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 (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) 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).

Neither we nor any of the Initial Purchasers is making any representation to any purchaser of the Notes regarding the legality of an investment in the Notes by such purchaser under any legal investment or similar laws or regulations. You should not consider any information in this offering circular to be legal, business or tax advice. You should consult your own attorney, business adviser and tax adviser for legal, business and tax advice regarding an investment in the Notes.

We reserve the right to withdraw this Offering at any time. We and the Initial Purchasers also reserve the right to reject any offer to purchase the Notes in whole or in part for any reason and to allocate to any prospective investor less than the full amount of Notes sought by such investor.

IN CONNECTION WITH THE OFFERING, TO THE EXTENT PERMITTED BY, AND IN ACCORDANCE WITH, APPLICABLE LAWS AND REGULATIONS, EACH OF THE INITIAL PURCHASERS, WHO MAY ACT AS STABILIZATION MANAGERS (OR PERSONS ACTING ON BEHALF OF THE STABILIZATION MANAGERS), MAY OVER-ALLOT OR EFFECT TRANSACTIONS WITH A VIEW TO SUPPORTING THE MARKET PRICE OF THE NOTES AT A LEVEL HIGHER THAN THAT WHICH MIGHT OTHERWISE PREVAIL (A “STABILIZING ACTION”). HOWEVER, THERE IS NO ASSURANCE THAT THE STABILIZATION MANAGERS (OR PERSONS ACTING ON BEHALF OF THE STABILIZATION MANAGERS) WILL UNDERTAKE A STABILIZING ACTION. ANY STABILIZING ACTION MAY BEGIN ON OR AFTER THE DATE ON WHICH ADEQUATE PUBLIC DISCLOSURE OF THE TERMS OF THE OFFER OF THE 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 NOTES AND 60 DAYS AFTER THE DATE OF THE ALLOTMENT OF THE NOTES. ANY STABILIZING ACTION OR OVER-ALLOTMENT MUST BE CONDUCTED BY THE STABILIZATION MANAGERS (OR ANY PERSON ACTING ON BEHALF OF THE STABILIZATION MANAGER) IN ACCORDANCE WITH ALL APPLICABLE LAWS AND RULES.

THE NOTES HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT OF KOREA. THE NOTES HAVE NOT BEEN AND WILL NOT BE OFFERED, SOLD OR DELIVERED, 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 LAW OF KOREA AND ITS ENFORCEMENT DECREE), OR TO ANY OTHER PERSON FOR REOFFERING, RESALE OR RE-DELIVERY, DIRECTLY OR INDIRECTLY, IN KOREA OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, ANY RESIDENT OF KOREA, EXCEPT AS OTHERWISE PERMITTED BY APPLICABLE KOREAN LAWS AND REGULATIONS. IN ADDITION, UNTIL THE EXPIRATION OF ONE YEAR AFTER THE ISSUANCE OF THE NOTES, THE NOTES MAY NOT BE TRANSFERRED TO ANY RESIDENT OF KOREA OTHER THAN A “QUALIFIED INSTITUTIONAL BUYER” (A “KOREAN QIB”, AS DEFINED IN THE REGULATION ON SECURITIES ISSUANCE, PUBLIC DISCLOSURE, ETC. OF KOREA) WHO IS REGISTERED WITH THE KOREA FINANCIAL INVESTMENT ASSOCIATION AS A KOREAN QIB, PROVIDED THAT THE AMOUNT OF THE NOTES ACQUIRED BY SUCH KOREAN QIBS IN THE PRIMARY MARKET IS LIMITED TO NO MORE THAN 20 PERCENT OF THE AGGREGATE ISSUE AMOUNT OF THE NOTES.

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## CERTAIN DEFINED TERMS AND CONVENTIONS

In this offering circular, unless otherwise specified or the context otherwise requires:

- “we,” “us,” “our,” “ourselves,” “our company,” “the Company” or “LG Energy Solution” refers to LG Energy Solution, Ltd. and (except for references to “the Company”) its consolidated subsidiaries or, as such references relate to the period prior to December 1, 2020 (the date of incorporation of LG Energy Solution, Ltd.), the former energy solution business division of LG Chem, Ltd.;
- “LG Chem” refers to LG Chem, Ltd.;

- “LG Group” refers to a group of companies affiliated with LG Corporation (the LG Group is not a legal entity but a reference to a group of such affiliated companies for the purposes of the Monopoly Regulation and Fair Trade Act of Korea);
- “Government” refers to the government of the Republic of Korea;
- “Korea” refers to the Republic of Korea;
- “U.S.” or the “United States” refers to the United States of America;
- “Euro,” “EUR” or “€” refers to the currency of the participating member states of the European Union;
- “U.S. dollars,” “U.S.\$,” “US\$” or “\$” refers to the lawful currency of the United States of America;
- “CAD” refers to the lawful currency of Canada;
- “S\$” refers to the lawful currency of Singapore;
- “Chinese Renminbi” refers to the lawful currency of the People’s Republic of China;
- “Japanese Yen” refers to the lawful currency of Japan; and
- “Won” or “₩” refers to the lawful currency of the Republic of Korea.

All exchange rate data between the Won and the U.S. dollar in this offering circular, unless otherwise specified, has been translated using the applicable market average exchange rate, announced by Seoul Money Brokerage Services, Ltd. in Seoul, rounded to the nearest tenth of one Won (the “Market Average Exchange Rate”). 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.

Any discrepancies in the tables included herein between totals and sums of the amounts listed are due to rounding.

The information on our website, <https://www.lgensol.com>, or any website directly or indirectly linked to such website does not form a part of this offering circular and should not be relied upon.

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## **PRESENTATION OF FINANCIAL INFORMATION**

Our audited consolidated financial statements as of and for the years ended December 31, 2022 and 2021 (the “2022/2021 Financial Statements”) and our unaudited consolidated interim financial statements as of and for the six months ended June 30, 2023 and 2022 (the “Interim Financial Statements”) included in this offering circular have been prepared in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (“Korean IFRS”), which differ in certain significant respects from generally accepted accounting principles in other countries, including the United States, as well as International Financial Reporting Standards as issued by the International Accounting Standards Board. We have made no attempt to identify or quantify the impact of these differences.

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## **ENFORCEABILITY OF CIVIL LIABILITIES**

We are a corporation with limited liability organized under the laws of Korea. Most of our directors, executive officers and certain other persons named in this offering circular are non-U.S. residents, and all or a significant portion of the assets of our directors, executive officers and certain other persons named in this offering circular and most of our assets are located or registered outside the United States. As a result, when compared to a U.S. company, it may be more difficult for investors to effect service of process in the United States upon or to enforce against us, our directors or executive officers judgments obtained in U.S. courts predicated upon civil liability provisions of the federal or state securities laws of the U.S. or similar judgments obtained in other courts outside Korea. There is doubt as to the enforceability in Korean courts, in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities predicated solely upon the federal and state securities laws of the United States.

## SUMMARY

The following summary highlights information appearing elsewhere in this offering circular and does not contain all of the information you should consider in making your investment decision. You should read this summary together with the more detailed information, including our financial statements and the related notes, appearing elsewhere in this offering circular. You should carefully consider, among other things, the matters discussed in “Risk Factors.”

### Our Company

We are one of the largest producers of rechargeable lithium-ion batteries in the world in terms of production capacity as of December 31, 2022 according to BloombergNEF. We offer a wide array of battery products for use in electric vehicles (“EVs”), mobility and IT devices and energy storage systems (“ESS”). Our business comprises all stages of product research and development, manufacturing and sales. Since starting commercial production of lithium-ion batteries in 1999 for the first time in Korea, we have been the pioneer in the global rechargeable battery market with expanding facilities and networks in major hubs across the world. We had operated as the energy solution business division of LG Chem until we were split-off into a wholly-owned subsidiary of LG Chem in December 2020 (the “Split-off”). In January 2022, we issued and sold 34,000,000 shares of our common stock, and LG Chem sold 8,500,000 shares of our common stock, through an initial public offering. Following the offering, LG Chem held 81.8% of our total shares.

Our core product lines are as follows:

- **Advanced Automotive Battery.** We develop and manufacture high-performance rechargeable lithium-ion batteries that power various EVs. These include batteries used in EVs, plug-in hybrid vehicles, hybrid EVs and micro hybrid vehicles.
- **Mobility and IT Battery.** We produce batteries of varying shapes and sizes for use in mobility devices, as well as smartphones, laptops, power tools and other electric devices.
- **Energy Storage System.** Our ESS batteries are used in generators, power grids, commercial and industrial facilities, as well as households, allowing for storage and a stable stream of power supply.

We design, manufacture and sell advanced automotive batteries suited to power various sizes and types of EVs to major automobile original equipment manufacturers (“OEMs”). Our customers for automotive batteries include many of the leading global EV OEMs. In addition to automotive batteries, we also produce rechargeable batteries for use in mobile electronic devices, ranging from smartphones and laptops to power tools and electric bikes. Our energy solution capabilities extend also to ESS batteries. ESS batteries enable storage of electric energy at source for consumption at a later time. Our diversified ESS battery product portfolio addresses the demands of various customers, including power plants, solar and wind power farms, factories, commercial and industrial facilities and households.

We currently operate lithium-ion battery manufacturing facilities in Korea, the United States, China and Poland with a total annual production capacity of approximately 200 GWh as of December 31, 2022. In order to respond to increasing global demand for automotive batteries, as well as achieve additional economies of scale, we plan to expand our production facilities in each of our key markets, including in North America, China and Europe, as well as expand our presence in other countries. In the U.S., our joint venture with General Motors (“GM”), Ultium Cells LLC, built a new automotive battery manufacturing facility in Ohio, which started mass production in the fourth quarter of 2022. Ultium Cells LLC also plans to build its second automotive battery manufacturing facility in Tennessee, which is expected to be completed in 2024. In January 2022, Ultium Cells LLC announced its plans to invest an additional US\$2.6 billion to build its third battery manufacturing facility in Michigan, U.S., which is scheduled to begin mass production in 2024. We also plan to expand our stand-alone manufacturing

facility in Michigan and have recently formed a joint venture with Stellantis N.V. to produce battery cells and modules in Ontario, Canada, which is scheduled to begin mass production in 2025. In July 2023, the federal and Ontario state governments of Canada announced that they would jointly be providing production incentives of up to CAD 15 billion to such joint venture. In January 2023, we and Honda Motor Co. established the joint venture L-H Battery Company, Inc., to build another manufacturing facility in Ohio, which is expected to be completed in 2025. We have also announced our plans to build a battery production facility in Arizona for both cylindrical batteries for EVs, which is scheduled to become operational in the first half of 2025, and lithium-iron-phosphate (“LFP”) pouch batteries for ESS applications, which is scheduled to become operational in early 2026. Furthermore, we formed a joint venture with Hyundai Motor Company in May 2023 to construct a battery cell manufacturing facility in Georgia, U.S. In China, we plan to expand the existing Nanjing plant and construct additional production lines targeting global OEM plants and local EV startups as potential customers, and in Europe, we plan to expand our stand-alone production capacities for pouch-type EV batteries.

We were incorporated on December 1, 2020 when the energy solution business division of LG Chem was split off. Our consolidated revenue amounted to Won 17,852 billion in 2021, Won 25,599 billion in 2022, Won 9,413 billion in the six months ended June 30, 2022 and Won 17,521 billion in the six months ended June 30, 2023. We recorded profit of Won 930 billion in 2021, Won 780 billion in 2022, Won 317 billion in the six months ended June 30, 2022 and Won 1,027 billion in the six months ended June 30, 2023. We had total assets of Won 42,395 billion and total equity of Won 23,129 billion as of June 30, 2023, compared to total assets of Won 38,299 billion and total equity of Won 20,594 billion as of December 31, 2022.

## THE OFFERING

The following is a brief summary of certain terms of the Offering. For a more detailed description of the terms of the Notes, see “Terms and Conditions of the Notes.” Capitalized terms used herein and not defined have the meanings given to them in such sections.

<b>Issuer</b> . . . . .	LG Energy Solution, Ltd., a corporation with limited liability established under the laws of Korea.
<b>Offering</b> . . . . .	U.S.\$400,000,000 aggregate principal amount of 5.625% senior unsecured green notes due 2026 (the “2026 Notes”) and U.S.\$600,000,000 aggregate principal amount of 5.750% senior unsecured green notes due 2028 (the “2028 Notes,” and together with the 2026 Notes, the “Notes”).  The Notes have not been registered with the U.S. Securities and Exchange Commission (the “SEC”), and are being offered and sold outside the United States in reliance on Regulation S and inside the United States to qualified institutional buyers as defined under the Rule 144A (“QIBs”) in reliance on Rule 144A.
<b>Joint Bookrunners and Joint Lead Managers</b> . . . . .	Citigroup Global Markets Inc. The Korea Development Bank Merrill Lynch International Morgan Stanley & Co. International plc Standard Chartered Bank
<b>Fiscal Agent</b> . . . . .	Citicorp International Limited
<b>Registrar, Paying Agent and Transfer Agent</b> . . . . .	Citibank, N.A., London Branch
<b>Issue Date</b> . . . . .	September 25, 2023.
<b>Maturity Date</b> . . . . .	The 2026 Notes will mature on September 25, 2026 and the 2028 Notes will mature on September 25, 2028.
<b>Status of the Notes</b> . . . . .	The Notes will constitute our direct, unconditional, unsubordinated and unsecured obligations and shall at all times rank <i>pari passu</i> and without any preference or priority among themselves and with all of our other present and future direct, unconditional, unsubordinated and unsecured obligations, except as may be required by mandatory provisions of law.
<b>Interest</b> . . . . .	The 2026 Notes will bear interest at the rate of 5.625% per year and the 2028 Notes will bear interest at the rate of 5.750% per year.
<b>Interest Payment Dates</b> . . . . .	Interest on the Notes will be paid semi-annually on March 25 and September 25 of each year, commencing on March 25, 2024. For a further description of payments of interest on the Notes, see “Terms and Conditions of the Notes – Payments.”

<b>Taxation</b> . . . . .	Payments in respect of the Notes will be made free and clear of and without withholding or deduction for or on account of any present or future taxes, duties, assessments or governmental charges of whatever nature imposed or levied by or on behalf of Korea or by or within any political subdivision of Korea or any authority or agency of Korea having power to tax, unless the withholding or deduction of such taxes, duties, assessments or governmental charges is required by law. In that event, we will (subject to certain exceptions) pay such additional amounts as will result in the holders of the Notes (the “Holders”) receiving such amounts as they would have received in respect of such Notes had no such withholding or deduction been required, except in certain limited circumstances. See “Terms and Conditions of the Notes – Additional Amounts” and “Taxation – Korean Taxation.”
<b>Tax Redemption</b> . . . . .	We may redeem the Notes at our option, in whole but not in part, at their principal amount plus accrued interest to, but excluding, the date fixed for redemption, if we have or would become obligated to pay additional amounts in respect of certain Korean taxes imposed in respect of payments of principal of or interest on the Notes. See “Terms and Conditions of the Notes – Optional Redemption Due to Changes in Tax Treatment.”
<b>Denominations</b> . . . . .	The Notes will be issued in denominations of U.S.\$200,000 principal amount and integral multiples of U.S.\$1,000 in excess thereof.
<b>Form and Settlement</b> . . . . .	We will issue the Notes in the form of one or more fully registered global notes, registered in the name of a nominee of The Depository Trust Company (“DTC”). Except as described in “Terms and Conditions of the Notes,” the global notes will not be exchangeable for Notes in definitive registered form and will not be issued in definitive registered form. Any secondary market trading of book-entry interests in the Notes will take place through DTC participants, including Euroclear Bank SA/NV (“Euroclear”) and Clearstream Banking S.A. (“Clearstream”). See “Clearance and Settlement.” The Notes may not be sold or otherwise transferred except in accordance with the restrictions described under “Transfer Restrictions.”
<b>Use of Proceeds</b> . . . . .	The net proceeds from the issuance of the 2026 Notes are expected to be U.S.\$396,772,000 and the net proceeds from the issuance of the 2028 Notes are expected to be U.S.\$596,484,000, in each case after deducting a combined management and underwriting commission but not estimated expenses of the Offering. We will allocate an amount equivalent to the net proceeds from the issuance of the Notes to finance and/or refinance, in whole or in part, new or existing Eligible Projects (as defined in “Use of Proceeds”) in accordance with our Green Financing Framework, which is in alignment with the Green Bond Principles 2021 published by the International Capital Markets Association and the Green Loan Principles 2023 published by the Loan Market Association. See “Use of Proceeds.”

**Ratings** . . . . . The Notes are expected to be rated “Baa1” by Moody’s and “BBB+” by S&P. A rating is not a recommendation to buy, sell or hold the Notes and may be subject to revision, suspension or withdrawal at any time by the assigning rating organization. Each such rating should be evaluated independently of any other rating of the Notes or of our other securities.

**Governing Law** . . . . . The Notes and the Fiscal Agency Agreement will be governed by, and construed in accordance with, the laws of the State of New York.

**Listing and Trading** . . . . . Application will be made to the Singapore Stock Exchange for the listing and quotation of the Notes on the Singapore Stock Exchange. For so long as the Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, the 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). Accordingly, the Notes, if traded on the Singapore Stock Exchange, will be traded in a minimum board lot size of U.S.\$200,000. 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 a global note is exchanged for individual definitive notes, we will appoint and maintain a paying agent in Singapore, where the individual definitive notes may be presented or surrendered for payment or redemption. In addition, in the event that a global note is exchanged for individual definitive notes, an announcement of such exchange will be made by or on behalf of us through the Singapore Stock Exchange and such announcement will include all material information with respect to the delivery of the individual definitive notes, including details of the paying agent in Singapore.

**Selling Restrictions** . . . . . There are restrictions on the distribution of this offering circular and the making of solicitations pursuant hereto in certain jurisdictions, including, among others, the United States, the European Economic Area, the United Kingdom, Korea, Japan, Hong Kong, Singapore, Italy and Switzerland. See “Plan of Distribution” and “Transfer Restrictions.”

**LEI code** . . . . . 988400QX6P286XA6ZS85

<b>Security Codes</b> . . . . .	<u>ISIN</u>	<u>CUSIP</u>
2026 Notes		
Rule 144A:	US50205MAA71	50205M AA7
Regulation S:	USY5S5CGAA01	Y5S5CG AA0
2028 Notes		
Rule 144A:	US50205MAB54	50205M AB5
Regulation S:	USY5S5CGAB83	Y5S5CG AB8

## SUMMARY FINANCIAL DATA

The following tables set forth our summary financial data. Our summary financial data as of and for the years ended December 31, 2021 and 2022 set forth below have been derived from the 2022/2021 Financial Statements included elsewhere in this offering circular. The summary financial data as of and for the six months ended June 30, 2022 and 2023 set forth below have been derived from the Interim Financial Statements included elsewhere in this offering circular. It is important that you read our summary financial data set forth below in conjunction with our consolidated financial statements and the related notes, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and other historical financial information appearing elsewhere in this offering circular. Our consolidated financial statements included in this offering circular have been prepared in accordance with Korean IFRS.

### Summary Consolidated Statements of Comprehensive Income Data

	For the Years Ended December 31,		For the Six Months Ended June 30,	
	2021	2022	2022	2023
	(In billions of Won)		(In billions of Won)	
<b>Revenue</b> . . . . .	₩ 17,852 <sup>(1)</sup>	₩ 25,599	₩ 9,413	₩ 17,521
<b>Cost of sales</b> . . . . .	(13,953)	(21,308)	(7,816)	(14,892)
<b>Gross profit</b> . . . . .	3,899	4,291	1,597	2,628
Other operating income . . . . .	–	–	–	211
Selling and administrative expenses . . . . .	(3,130)	(3,077)	(1,142)	(1,746)
<b>Operating profit</b> . . . . .	768	1,214	454	1,094
Finance income . . . . .	340	386	263	642
Finance costs . . . . .	(295)	(519)	(308)	(483)
Share of loss of associates and joint ventures . . . . .	(12)	(37)	(17)	(18)
Other non-operating income . . . . .	465	1,349	453	724
Other non-operating expenses . . . . .	(489)	(1,398)	(457)	(602)
<b>Profit before income tax</b> . . . . .	777	995	388	1,357
<b>Income tax expense</b> . . . . .	(77)	(215)	(72)	(330)
Profit from continuing operations . . . . .	701	780	317	1,027
Profit from discontinued operations . . . . .	229	–	–	–
<b>Profit (loss) for the period</b> . . . . .	₩ 930	₩ 780	₩ 317	₩ 1,027
<b>Other comprehensive income (loss) for the period, net of tax</b> . . . . .	509	(27)	309	453
<b>Total comprehensive income for the period, net of tax</b> . . . . .	₩ 1,438	₩ 752	₩ 626	₩ 1,480

(1) Includes a lump-sum settlement payment of Won 992 billion as our license revenue from SK Innovation Co., Ltd. pursuant to a settlement agreement in May 2021.

## Summary Consolidated Statements of Financial Position Data

	<u>As of December 31,</u>		<u>As of June 30,</u>
	<u>2021</u>	<u>2022</u>	<u>2023</u>
	(In billions of Won)		
<b>Assets</b>			
Current assets:			
Cash and cash equivalents	₩ 1,283	₩ 5,938	₩ 4,860
Trade receivables	2,914	4,772	5,358
Other receivables	815	462	528
Other current financial assets	21	9	1
Prepaid income taxes	149	46	33
Other current assets	457	581	644
Inventories	3,896	6,996	7,221
Total current assets	<u>9,536</u>	<u>18,804</u>	<u>18,645</u>
Non-current assets:			
Trade receivables	₩ 67	₩ 121	₩ 132
Other receivables	92	119	376
Other non-current financial assets	194	409	536
Investments in associates and joint ventures	226	204	226
Deferred tax assets	1,855	2,100	2,200
Property, plant and equipment	11,051	15,331	19,005
Intangible assets	455	642	703
Investment properties	224	213	213
Other non-current assets	64	357	357
Total non-current assets	<u>14,228</u>	<u>19,495</u>	<u>23,749</u>
<b>Total assets</b>	<u>₩ 23,764</u>	<u>₩ 38,299</u>	<u>₩ 42,395</u>
<b>Liabilities</b>			
Current Liabilities:			
Trade payables	₩ 2,178	₩ 3,842	₩ 4,398
Other payables	2,800	2,882	2,546
Borrowings	2,203	2,867	2,706
Provisions	1,527	977	992
Other current financial liabilities	-	4	6
Income tax payables	155	173	217
Other current liabilities	610	700	441
Total current liabilities	<u>9,474</u>	<u>11,445</u>	<u>11,305</u>
Non-current liabilities:			
Other payables	₩ 11	₩ 37	₩ 79
Borrowings	4,766	5,243	6,635
Other non-current financial liabilities	0	1	1
Provisions	581	519	775
Net defined benefit liabilities	0	0	0
Deferred tax liabilities	59	108	91
Other non-current liabilities	131	353	379
Total non-current liabilities	<u>5,548</u>	<u>6,261</u>	<u>7,961</u>
<b>Total liabilities</b>	<u>15,022</u>	<u>17,706</u>	<u>19,266</u>
<b>Equity</b>			
Share capital	₩ 100	₩ 117	₩ 117
Capital surplus	7,122	17,165	17,165
Accumulated other comprehensive income	406	296	665
Retained earnings	338	1,155	2,089
<b>Equity attributable to owners of the Parent Company</b>	<u>7,966</u>	<u>18,732</u>	<u>20,036</u>
<b>Non-controlling interest</b>	<u>776</u>	<u>1,862</u>	<u>3,093</u>
<b>Total equity</b>	<u>8,742</u>	<u>20,594</u>	<u>23,129</u>
<b>Total liabilities and equity</b>	<u>₩ 23,764</u>	<u>₩ 38,299</u>	<u>₩ 42,395</u>

## Supplemental Information

	For the years ended		For the six months ended	
	December 31,		June 30,	
	2021	2022	2022	2023
	(In billions of Won)			
Net cash flows provided by (used in) operating activities . . . . .	₩ 979	₩ (580)	₩ (551)	₩ 1,296
Net cash flows used in investing activities . . . . .	(2,178)	(6,259)	(9,045)	(4,306)
Net cash flows provided by (used in) financing activities . . . . .	883	11,415	10,192	1,897

## RISK FACTORS

*You should carefully consider the risks described below and all other information contained in this offering circular before making an investment decision. If any of the following risks, as well as other risks and uncertainties that are not currently known or that we currently think are immaterial, are actually realized, our business, financial condition and results of operations could be materially and adversely affected. In that event, the trading price of the Notes could decline, and you may lose part or all of your investment.*

### **Risks Relating to Our Business**

***Our businesses are dependent on a number of industries, including EV, IT and renewable energy, and general conditions in the global economy, and a downturn experienced by any of these industries or the global economy or government policies that affect these industries could adversely affect our business.***

We manufacture and sell a broad range of rechargeable lithium-ion batteries used for EVs, mobility and IT devices and energy storage systems. Accordingly, our business is affected by fluctuations in market demand for the products that use our rechargeable batteries, especially EVs, which represent the largest market for our products. In recent years, the global EV market has grown rapidly. However, the development of the EV market is still at its early stage, as the production and sales of EVs account for a relatively small proportion of the overall automotive industry. Factors such as purchase cost, charging time, cruise range, battery life, and the availability of conveniently-located charging and supporting facilities have affected and will continue to affect the development of the EV industry. The market demand for EVs may fluctuate greatly in the future in light of such factors, which in turn will have a significant impact on demand for our battery products.

In addition, the demand for EVs is significantly affected by government subsidies and economic incentives supporting the purchase and use of EVs. Currently, such subsidies and incentives include tax credits or rebates that encourage the purchase of EVs and lower charging rates for electricity, which may be reduced or eliminated or may expire in the future.

In August 2022, the United States enacted the Inflation Reduction Act of 2022 (“IRA”), which, among others, provides tax benefits to EVs that are assembled within North America and utilize batteries that (i) have a certain percentage of their critical minerals extracted or processed in the United States or in a country with a free-trade agreement with the United States, (ii) are manufactured or assembled in North America and (iii) do not contain components manufactured or assembled by a foreign country of concern, including China. Partly as a response to the enactment of such act, we have expanded our supply chain to accommodate the IRA’s requirements by entering into mineral supply agreements with companies in the United States, Australia and Canada, among others. For example, in June 2023, we entered into a joint research and development agreement with Novonix Limited, a leading battery materials and technology company in the United States, for the joint research and development of artificial graphite anode materials for lithium-ion batteries. We have also expanded our production capabilities within the United States, including through joint venture agreements with GM and Honda Motor Co., Ltd. See “Business – Production Facilities.” Although our products currently meet the requirements of the IRA, there can be no assurance that the IRA will not be further amended or that our products will continue to meet its requirements in the future. If our products fail to meet the requirements of the IRA, we may be excluded from the list of approved suppliers for electric vehicle manufacturers in the United States leading to a decrease in our sales. Furthermore, the products of certain of our major customers, including global automotive manufacturers, could fail to meet the requirements of the IRA, which in turn may indirectly lead to a decrease in our sales. Any such decrease in sales may have a material adverse effect on our business, financial condition and results of operations.

Demand for EVs is also affected by fluctuations in the prices of gasoline and diesel fuel, which have been highly volatile in recent years. Any changes in such government regulations or policies or prolonged periods of low prices of gasoline and diesel fuel may adversely impact the market condition of the EV industry and result in a decline in demand for our rechargeable batteries.

Furthermore, EV, IT and renewable energy industries are sensitive to general conditions in the global economy. Macroeconomic factors, such as the economic growth rate, employment levels, interest rates, inflation rates, exchange rates, commodity prices, demographic trends and fiscal policies of governments, may have a significant effect on such industries. In times of recession, orders for our products may decrease and we may need to adjust our production levels and pricing. Uncertainties in the global economy have increased in recent years, with the global financial and capital markets experiencing substantial volatility. In particular, the COVID-19 pandemic had materially and adversely affected the global economy and financial markets. See “–The global COVID-19 pandemic and any possible occurrences of other types of widespread infectious diseases could materially and adversely affect our business, results of operations or financial condition.”

***Our industry may suffer from overcapacity if demand for battery products does not grow as expected.***

We may be adversely affected by overcapacity in the rechargeable battery industry if demand for battery products does not grow as currently expected. Battery product manufacturers have typically increased their capital investments when demand growth in the end markets that use our battery products is expected. In particular, an increase in global demand for EVs in recent years has led to an increase in global production capacity to manufacture lithium-ion batteries, which is a trend that is expected to continue in the near future. These capital investments to increase global production capacity as well as adoption of new manufacturing technologies may result in increases in the supply of battery products that are not matched by commensurate growth in demand in the end markets for battery products. Furthermore, construction of new manufacturing facilities and other capacity expansion projects in the rechargeable battery industry are undertaken with a multi-year time horizon based on expectations of future market trends. Therefore, even if overcapacity issues emerge in the industry, there may be continued capacity expansion in the near future due to pre-committed capacity expansion projects in the industry that were undertaken in past years. From time to time, we may experience prolonged periods of industry-wide oversupply and weak prices, particularly during periods subsequent to the completion of major production capacity expansion projects of our competitors, and it would be difficult to remedy such situation by reducing production given the nature of our industry. An actual or anticipated deterioration in market conditions may result in a decline in demand for our products that may have a negative impact on the prices at which they can be sold. No assurance can be provided that any future downturns resulting from any large increases in capacity or other factors affecting the rechargeable battery industry would not have a material adverse effect on our business, financial condition and results of operations.

***We operate in highly competitive markets, and our failure to successfully compete would adversely affect our market position and business.***

We operate in the rechargeable lithium-ion battery market, which is highly competitive. It is characterized by strong competition among a few key producers and their aggressive capital investments, research and development (“R&D”) expenditures and strategic transactions such as joint ventures vying for a greater market share. We primarily compete with major lithium-ion battery manufacturers in Korea, China and Japan, including Korea’s Samsung SDI Co., Ltd. and SK on Co., Ltd. (“SK on”), China’s Contemporary Amperex Technology (CATL) and BYD Co., Ltd. and Japan’s Panasonic Corporation.

The most critical factors of success in the lithium-ion battery business are technological competitiveness, production capacity and competitive pricing. In addition, we compete primarily based on the following factors:

- product safety, performance, quality and reliability;

- manufacturing efficiency;
- development of new products and manufacturing processes;
- responsiveness to changes in customer needs and regulatory framework;
- distribution capacity and ability to deliver in large volumes on a timely basis;
- development and expansion of marketing and sales network; and
- stable supplies of raw materials.

Entry into the lithium-ion battery manufacturing business requires substantial capital expenditures and significant technological and manufacturing expertise. Although we believe that our existing investment, experience and technological expertise provide significant “time to market” and economies of scale advantages over any potential new entrant into this market, we may face increasing competition from emerging companies that are capable of significantly expanding the scale of their operations. In addition, some of the manufacturers of EVs have increased production of lithium-ion batteries in recent periods and have announced their plans for additional capital investment to increase battery production, which may lead to intensified competition among manufacturers of lithium-ion batteries in the future. See “–Increased production of batteries by automotive manufacturers could negatively affect demands for our products and intensify competition.”

Some of our existing and new competitors may have greater financial, marketing, technical or other resources than us. Greater resources may allow such competitors to respond to changes in market demand more quickly and produce, market and distribute enhanced products, as well as better withstand downturns in the markets in which we compete. In addition, intensified competition may lead to consolidation in the industry as well as the formation of strategic alliances such as business partnerships or joint ventures among our competitors, which may enable certain competitors to further benefit from greater economies of scale and more effectively compete with us. There is no assurance that we will be able to continue to compete successfully, and our failure to do so could have a material adverse effect on our business, financial condition and results of operations.

***Our results of operations could be negatively impacted by fluctuations in the market price of the raw materials and components, as well as any shortage or supply disruptions.***

Our production operations depend on obtaining adequate supplies of quality raw materials and components on a timely basis. The main raw materials required for the production of lithium-ion batteries include cathode materials, anode materials, separators and electrolytes. The purchase price and supply of our raw materials have fluctuated and will continue to fluctuate, affected by the changes in commodity prices and market supply and demand, and our ability to pass on increases in the cost of raw materials and components to our customers may be limited. Moreover, prices for our products are generally determined through negotiations with our customers, based generally on the complexity of the product specifications, market supply and demand and the labor and technology involved in the design or production processes. If we become subject to any significant increase in the cost of raw materials or components that were not anticipated when negotiating the price terms, we may be unable to pass on such cost increases to our customers. Future increases in the prices of our raw materials, and our inability to pass along such increases to our customers on a timely basis may have a material adverse effect on our business, financial condition and results of operations.

We depend heavily on overseas sources for the raw materials required in the production of lithium-ion batteries. To mitigate any potential interruptions of supplies and the vulnerability of our production schedule, we generally source most of our raw materials as well as key components from multiple suppliers. Additionally, we have made, and continue to make, strategic arrangements, including equity investments and long-term supply agreements, with top suppliers of raw materials. Although we strive to

source our key raw material requirements from reliable and competitive suppliers in the domestic and overseas markets, the supply and market price of key raw materials remain subject to a variety of factors that are beyond our control. These may include military conflicts such as the ongoing invasion of Ukraine by Russia, natural disasters, health hazards such as the COVID-19 pandemic, civil unrest, strikes or trade sanctions or restrictions, including those relating to conflict minerals. For example, in August 2022, the United States enacted the IRA, which placed certain restrictions on the sources of the critical minerals used in our products in receiving tax benefits. Any such factor could disrupt our sources of raw materials and could have a material adverse effect on our output capacity, and in turn on our business, financial conditions and results of operation.

In addition, shortages or supply disruptions of key components or raw materials of our customers could adversely affect their production operations, which in turn could have an adverse effect on their demand for our products. For example, during the COVID-19 pandemic, the global automotive industry has experienced a shortage in the supply of automotive semiconductor products as an increase in global demand for semiconductors in general, resulting from more spending on IT products and infrastructure, led some semiconductor manufacturers to switch from producing automotive semiconductors to other types of semiconductors that were more lucrative. The resulting shortage in the supply of automotive semiconductor products has forced many global automotive manufacturers to reduce the production of automobiles including EVs, and such production cuts have negatively affected our customers' demand for our battery products. Although there have been signs of gradual improvement in the supply of automotive semiconductors recently, if the shortage of automotive semiconductor products continues to persist, it may have an adverse impact on our business.

***Problems with product quality, including defects, in our products could result in a decrease in customers and sales, recalls and unexpected expenses and loss of market share.***

The success of our business depends on our ability to consistently deliver products with high quality and reliability. If we produce products that do not meet customer specifications, contain or are perceived to contain defects or are otherwise incompatible with their intended uses, we may face recalls involving our products, returns or cancellations of orders and customer complaints. In such cases, we may incur substantial costs in remedying defects in our products, which could include material inventory write-downs and diversion of our personnel's attention from product development and other business activities. If actual or perceived problems with nonconforming, defective or incompatible products occur after we have shipped our products, we may not only have liability for providing replacements or otherwise compensating customers, but also suffer damage to our reputation as well as relationships with key customers. Any problems with our product quality may harm our results of operations, adversely affect our reputation among clients and potential clients, and decrease our overall market share.

Moreover, as our products contain harmful substances, any defects or the improper performance of our products may directly or indirectly result in serious harm to the environment and may be detrimental to human health and safety. The result of any such harm could subject us to product liability claims for damages, including class actions. As our customers sell products including our batteries to the end consumers in their respective markets, we are also exposed to potential product liability claims by such end consumers in the event of any health or safety damage from the use of our products. The costs and resources required to defend such claims may be substantial and, if such claims are successful, we may be responsible for paying some or all of the damages. Any of the foregoing incidents that arise from our product defects or malfunctions could have a material adverse effect on our business, financial condition and results of operations.

***Safety and fire risks relating to rechargeable lithium-ion batteries, related recalls and resulting negative publicity may adversely impact our business.***

Due to the high energy density inherent in lithium-ion batteries, they may pose certain safety risks, including the risk of fire. We incorporate procedures in our research and development, product design, manufacturing processes and transportation of our products that are intended to minimize safety risks,

but accidents may occur and/or our products may require repair or replacement due to safety concerns. We and our customers may be required by government agencies to conduct recalls of our battery products or EVs equipped with our battery products, or such recalls may be initiated on a voluntary basis to address consumers' safety concerns. The cost of such recalls could be significant and have a material adverse effect on our business, financial condition and results of operations.

For example, in May 2023, Jaguar voluntarily recalled certain electric vehicle models for which we manufacture the battery system, following Jaguar's investigation in February 2022 after a number of fires relating to such vehicles were reported. The impact of such recalls on our business cannot be predicted at this time.

In October 2020, the Ministry of Land, Infrastructure and Transport of Korea (the "MOLIT") announced a recall of Hyundai Motor Company's Kona EVs (approximately 26,000 vehicles), for which we manufacture the battery system, after a number of fires relating to such vehicles were reported. The MOLIT subsequently announced the investigation result of Korea Automobile Testing & Research Institute that the fires may have resulted from an electrical short caused by folded anode tabs in some of the battery cells manufactured at our Nanjing plant from September 2017 to July 2019. In February 2021, Hyundai Motor Company voluntarily conducted global recalls of additional EVs (approximately 82,000 vehicles), including Kona EVs, Ioniq EVs and Elec City electric buses, to replace all of these vehicles' battery systems. In March 2021, we agreed with Hyundai Motor Company to pay approximately 70% of the costs relating to the replacement of such battery systems, estimated to be approximately Won 1 trillion in total.

In October 2020, the U.S. National Highway Traffic Safety Administration (the "NHTSA") initiated an investigation of 2017-2019 model year Chevrolet Bolt EVs after a number of fires relating to such vehicles were reported. In November 2020, GM voluntarily initiated a recall for certain of its 2017-2019 model year Chevrolet Bolt EVs equipped with batteries that may pose a risk of fire. After a battery fire in a vehicle that was subject to the recall, we (as manufacturer of the battery cells), LG Electronics (as manufacturer of the battery modules and packs) and GM conducted a joint investigation and determined that the simultaneous presence of two rare manufacturing defects, consisting of a torn anode tab and folded separator, in the same battery cell could potentially cause battery fires in certain of these Bolt EVs. As a result, in August 2021, GM expanded the recall to include all 2017-2022 model year Chevrolet Bolt EVs and EUVs, replacing battery modules or packs of (i) all 2017-2019 model year Bolt EVs and (ii) 2020-2022 model year Bolt EVs that are equipped with defective battery modules or packs. In October 2021, LG Electronics reached an agreement with GM to reimburse GM for costs and expenses associated with the recall. We and LG Electronics estimated such reimbursement amount to be Won 1.4 trillion based on the expected number of vehicles that were subject to the recall and expected replacement cost, estimated based on our prior experience, and in July 2022, we and LG Electronics agreed to split such costs equally. In connection with such recall, in July 2021, a number of putative class action lawsuits were filed in the United States against GM alleging GM's failure to disclose and adequately repair an alleged defect of the batteries in certain of its Chevrolet Bolt EVs. In September 2021, the plaintiffs of such putative class action case filed an amended complaint to include us and other manufacturers of battery components as defendants. While we intend to vigorously defend against such claims, the outcome or impact of such lawsuit cannot be predicted at this time. In September 2021, we received an information request from the NHTSA relating to its investigation of Chevrolet Bolt EVs, and in February 2022, the NHTSA concluded that there was no need for additional recalls and closed the investigation. See "Business-Legal Proceedings."

In April 2022, we received an information request from the NHTSA relating to the recall of certain EVs, and has since submitted responses regarding its battery products, quality control and corrective actions. The impact of such investigation on our business cannot be predicted at this time. See "Business-Legal Proceedings."

In July 2021, a number of putative class action lawsuits were filed in the United States against GM for failing to disclose and adequately repair such alleged defects of the batteries, and in September 2021, the plaintiffs of such putative class actions filed amended complaints to include us as defendants, among others, for manufacturing the allegedly defective batteries. In addition, in May 2021, a number of putative class action lawsuits were filed in Canada against GM alleging GM's failure to disclose and adequately repair an alleged defect of the batteries in certain of its Chevrolet Bolt EVs. In August 2022, the plaintiffs of such putative class action case filed an amended complaint to include us as an additional defendant. While we intend to vigorously defend against such claims, the impact of such lawsuits on our business cannot be predicted at this time.

In February 2020, the Ministry of Trade, Industry and Energy of Korea (the "MOTIE"), as a result of its investigation that took place after a number of fires relating to the use of ESS batteries which occurred at industrial sites in Korea, determined that the fires may have been caused by, among others, the use of such ESS batteries, and announced certain safety measures including limiting the maximum state of charge. In February 2020, we voluntarily recalled certain models of our ESS batteries manufactured at our Nanjing plant in 2017, replacing batteries at approximately 250 ESS facilities in Korea at our expenses. In addition, in May 2021, we conducted a voluntary global recall of certain models of our ESS batteries produced at our ESS battery plant in China from April 2017 to September 2018 to address a potential risk of fire related to ESS-specific electrodes under severe operating environments. We recognized a provision for warranty expenses of Won 426.9 billion in connection with such recall in 2021.

In addition to the recalls described above, fire incidents have occurred with respect to other EVs and ESS facilities equipped with our batteries. While we and our customers, as well as government agencies, are investigating such fire incidents, it is difficult to analyze the causes of fire incidents as EVs and ESS facilities contain complex components and software, including battery management systems, and the products are typically destroyed in fire. If any such fire incident is found to have been caused by defects in our battery products, we may be responsible for the cost of such recalls to repair or replace our battery products and may need to recognize a substantial amount of provision for warranty expenses.

We may also become subject to claims from our customers for property damages and any injuries resulting from the fires involving our batteries, as well as regulatory fines and penalties. While we have established provisions with respect to potential costs and losses relating to batteries sold to customers as discussed above and believe we have adequate insurance policies to cover a portion of such costs and losses, there is no guarantee that such provisions and insurance coverage will be sufficient to cover all of our costs and losses relating to our batteries. In addition, our battery sales may be negatively impacted by unfavorable publicity relating to our batteries. Accordingly, the fires involving our batteries and related costs and losses could materially and adversely affect our reputation, business, financial condition and results of operations.

***Increased production of batteries by automotive manufacturers could negatively affect demands for our products and intensify competition.***

In response to the growing demand for EVs, many automotive manufacturers have increased production of EVs and announced plans to increase their own production of rechargeable batteries, which comprise a significant portion of the total manufacturing cost of an EV. Recently, several global automotive manufacturers, including some of our key customers, such as Tesla and Volkswagen, have announced their plans to build their own battery manufacturing facilities and increase in-house battery production. Our customers' capital investment in in-house battery manufacturing will increase the overall supply of battery products in the long term, negatively affect our customers' purchase volume from us and may lead to intensified competition among manufacturers of lithium-ion batteries in the future. See "—We operate in highly competitive markets, and our failure to successfully compete would adversely affect our market position and business."

In addition, global automotive manufacturers may enter into joint ventures with battery manufacturers (such as our joint venture with GM) to increase their production of batteries. If other global automotive manufacturers begin to increasingly fulfill their battery needs through their own joint ventures, they may rely less on third-party manufacturers, including us. Moreover, as these joint ventures invest a substantial amount of capital in constructing battery manufacturing facilities, they would likely contribute to an overall increase in the supply of battery products in the near future, which could negatively affect demands for our products as well as intensify competition in the industry.

***We derive a majority of our revenue from a limited number of customers and any significant decrease in their order levels will negatively affect our business.***

A majority of our revenue is derived from a limited number of customers, most of which are global automotive manufacturers. Our top five customers accounted for 48%, 51%, 48% and 58% of our total revenue in 2021, 2022 and the six months ended June 30, 2022 and 2023, respectively. See “Business–Customers, Sales and Distribution.” Although our long-term business relationships with our major customers provide high visibility for future revenue, we cannot assure you that we will be able to maintain our relationships with them in the future. Demand from our major customers may fall short of our expectations due to changes in our customers’ business models, strategies or financial condition, or changes in the automotive market environment and macroeconomic conditions, including regulatory changes such as the enactment of the IRA in the United States in August 2022, among others. In addition, any adverse changes in our relationships or in the key commercial arrangements with our major customers, such as the purchase price, could adversely affect our business, financial condition and results of operations.

If any of our major customers significantly reduces its purchase volume or ceases to place orders with us, or if we misinterpret market demand, we may not be able to identify new customers in a timely manner and conduct our sales on comparable terms, or seek alternatives to mitigate the risk of a decrease in our sales, which in turn could have a material adverse effect on our business, financial condition, results of operations and prospects.

***Our success depends not only on our own ability but also on our customers’ ability to develop and manufacture products in a timely and cost-efficient manner to address evolving user preferences, regulatory standards, and technological advancement. Failure to do so could reduce the demand for our products, and in turn cause a decline in our revenue and profitability.***

Our performance depends, to a significant extent, upon our own ability to anticipate and respond to emerging industry standards and customer preferences by way of ensuring developments of novel products and enhancements to existing products in a timely and cost-efficient manner. The markets for our products are characterized by constantly evolving technology and industry standards that outpace products under development or production, often resulting in product obsolescence or shortening product lifecycles. We expect to continue to invest in research and development to improve and diversify our product offerings and enhance our production facilities and manufacturing processes.

However, there can be no assurance that we will succeed in focusing our research and development efforts on technologies that eventually become widely accepted, or on products that are timely released or commercially viable. Further advancements in technologies and their wider adoption as well as the adoption of alternative technology solutions, and our failure to adequately anticipate and plan for such changes, could result in a significant reduction in the demand for our products.

Our success is also closely interrelated with the performance of our customers’ end-use products in the marketplace as a substantial portion of our sales are made to downstream manufacturers that use lithium-ion batteries as a component in their production of end-use products. Major customers for our EV batteries include multinational automotive manufacturers such as Volkswagen, GM, Ford, Renault and Hyundai Motor Company (See “Business–Customers, Sales and Distribution”) and there are various risks beyond our control that may dictate the success or failure of a particular product offered by our customers, some of which include:

- competition faced by our customers in their industries;
- market acceptance of, and demand for, our customers' products;
- research and development, engineering, sales, marketing and management capabilities of our customers;
- technical challenges unrelated to our technology or products that our customers may face in developing their products;
- our customers' financial and other resources; and
- changes in government regulations and industry standards applicable to our clients and their products, including the IRA. See “–Our businesses are dependent on a number of industries, including EV, IT and renewable energy, and general conditions in the global economy, and a downturn experienced by any of these industries or the global economy or government policies that affect these industries could adversely affect our business.”

***If alternative rechargeable battery technologies, such as solid-state battery technology or fuel cell technology, are refined and adopted for wider commercial application, the demand for our current lithium-ion battery products may decrease.***

Lithium-ion batteries, which were initially developed and commercialized for use in IT devices and consumer applications starting in the early 1990s, have also become the leading battery type for use in EVs. Although we expect lithium-ion technology to continue to be the most widely used rechargeable battery technology in the near future, a variety of alternative battery technologies have developed over the years and additional new technologies may develop in the near future, which in the long-term may prove to be more cost-effective and have better performance compared to lithium-ion battery technology.

Solid-state battery technology, which utilizes solid electrolytes and electrodes rather than liquid electrolytes and positive and negative electrodes used in lithium-ion batteries, has received increased attention in the industry. Solid-state batteries are viewed as potentially safer than lithium-ion batteries given their use of nonflammable solid electrolytes and delivery of higher energy density. However, there are difficulties to a wider adoption of solid-state battery technology, including the development and procurement of appropriate raw materials necessary for their production. The higher costs of raw materials and complex manufacturing processes compared to lithium-ion batteries need to be addressed in order for solid-state batteries to be commercially competitive. In addition, commercialization would require additional time to address the strict standards imposed by EV manufacturers. In the past decade, some automobile manufacturers have also engaged in the commercialization of fuel cell EVs, which use fuel cells to power the electric motor, although they have been limited by the number of available hydrogen fueling stations and higher production costs.

In addition, various cathode materials have been developed to produce lithium-ion batteries, including lithium nickel cobalt manganese oxide (“NCM”) and lithium nickel cobalt aluminum oxide (“NCA”). While our products primarily use NCM and NCA as cathode material, some of our competitors, particularly certain manufacturers in China, are producing lithium-ion batteries using LFP as cathode material. As LFP batteries do not use nickel and cobalt, their production cost is lower compared to NCM and NCA batteries, in part due to the recent increase in the prices of nickel and cobalt. While LFP batteries have lower energy density than NCM and NCA batteries, they are increasingly used in the production of low-end EVs due to their cost competitiveness. If LFP battery manufacturers successfully increase the energy density of LFP batteries, they may be more widely adopted and reduce the demand for NCM and NCA batteries that we produce.

In the long term, there can be no assurance that energy sources produced using such alternative technologies may not replace lithium-ion batteries. Although such technologies have yet to be widely accepted, advancements in such technologies as well as the development of other alternative technologies may decrease the demand for lithium-ion battery products. If we fail to develop competitive technologies and products in response to the advancement of alternative technologies, our business and results of operations could be adversely affected.

***Our battery products primarily comprise of cylindrical and pouch types. If other form types of battery products, such as prismatic type, become more popular among our customers, our business could be adversely affected.***

Lithium-ion battery products currently produced generally take one of the three major form types: cylindrical, prismatic and pouch types. Each of these types offers a set of advantages and disadvantages, including differences in mechanical stability, heat control, optimal use of space and weight. Our battery products primarily consist of cylindrical and pouch types, and we have developed our technology and manufacturing know-how focusing on these types of batteries. If other form types of batteries, including prismatic type or other new forms, become more popular among our customers, market demands for our battery products may be negatively affected.

***Average selling prices of battery products have been steadily declining, and our margins would be adversely impacted if prices decrease faster than we are able to reduce our costs.***

The average selling prices of lithium-ion batteries have declined in general and are expected to continually decline with time irrespective of industry-wide cyclical fluctuations as a result of, among other factors, technological advancements, cost reductions and price competition. Although we may be able to take advantage of the higher selling prices typically associated with new products and technologies when they are first introduced in the market, such prices decline over time, and in certain cases, very rapidly, and we may have difficulties setting product prices at levels at which we can secure sufficient profit. If we are unable to effectively anticipate and counter the price erosion that accompanies our products, or if the average selling prices of our lithium-ion batteries decrease faster than the speed at which we are able to reduce our manufacturing costs, our gross margin would decrease and our results of operations and financial condition may be materially and adversely affected.

***The global COVID-19 pandemic and any possible occurrences of other types of widespread infectious diseases could materially and adversely affect our business, results of operations or financial condition.***

COVID-19, an infectious disease caused by severe acute respiratory syndrome coronavirus 2, was declared a “pandemic” by the World Health Organization in March 2020. The global outbreak of COVID-19 had led to global economic and financial disruptions and had adversely affected our business operations. We have been subjected to a number of risks, including but not limited to:

- an increase in unemployment among, and/or decrease in disposable income of, consumers who purchase the products manufactured by our customers and a decline in overall consumer confidence and spending levels, which in turn may decrease demand for our products;
- disruption in the normal operations of the businesses of our customers, which in turn may decrease demand for our products;
- disruption in the supply of raw materials, components and equipment from our suppliers and vendors;
- disruption in the delivery of our products to our customers;

- disruption in the normal operations of our business resulting from contraction of COVID-19 by our employees, which may necessitate our employees to be quarantined and/or our manufacturing facilities or offices to be temporarily shut down;
- fluctuations of the Won against major foreign currencies (see “–Fluctuations of the value of the Won against major foreign currencies may adversely affect our financial results”); and
- unstable global and Korean financial markets, which may adversely affect our ability to meet our funding needs on a timely and cost-effective basis.

In the event that a future recurrence of COVID-19 or other types of widespread infectious diseases cannot be effectively and timely contained, our business, financial condition and results of operations may be materially adversely affected.

***We face various risks associated with our overseas operations, and our inability to effectively manage and contain them could adversely affect our business and performance.***

A substantial portion of our production and sales are generated overseas. We operate six production facilities outside Korea located in China, the United States and Poland, as well as overseas marketing subsidiaries for sale of our products to customers outside of Korea. The demand for and market acceptance of our products marketed and sold abroad are subject to a high level of uncertainty and heavily influenced by local conditions. The following sets forth some of the risks associated with our overseas operations:

- exchange rate fluctuations;
- foreign exchange controls and fund restrictions on fund repatriation;
- expenses associated with understanding and analyzing overseas markets, monitoring regional and local economic, industry and consumer trends, and developing and maintaining efficient production, marketing and distribution presence in such markets;
- developing and maintaining customer relations, and providing quality customer service and support;
- expenses incurred and difficulties in connection with compliance with local commercial and legal requirements, including labor, environment and industry-specific regulations;
- unanticipated changes in regional and local economic conditions;
- political instability and civil unrest, cultural or regional conflicts and labor disputes; and
- trade barriers, such as local content requirements, tariffs, taxes and other restrictions and expenses, including the IRA. See “–Our businesses are dependent on a number of industries, including EV, IT and renewable energy, and general conditions in the global economy, and a downturn experienced by any of these industries or the global economy or government policies that affect these industries could adversely affect our business.”

Our overall success as a global leader of the lithium-ion battery business depends in part on our ability to successfully manage such risks. The likelihood of these risks materializing and the extent of their potential impact on our business would vary by locality and are difficult to predict with any degree of certainty. We may be unable to develop and implement policies that would be wholly effective in jurisdictions in which we operate. No assurance can be provided that our exposure to these risks, which may intensify as we expand our overseas operations, will not adversely affect our business, financial conditions, operations and future prospects.

***Our business requires a significant amount of capital expenditure for maintenance, upgrading and expansion of production capacity, and there is no guarantee that we will be able to successfully implement or fund our capital expenditure plans.***

We operate in an industry where producers with economies of scale enjoy a competitive advantage. Accordingly, to maintain long-term competitiveness and to continually improve profitability, our business requires a significant amount of capital investments for the maintenance, upgrading and expansion of production facilities and equipment in a timely and cost-efficient manner. Our total capital expenditures (consisting of cash used in acquisition of property, plant and equipment) amounted to Won 3,463 billion in 2021, Won 6,210 billion in 2022, Won 2,813 billion for the six months ended June 30, 2022 and Won 4,225 billion for the six months ended June 30, 2023, primarily for the expansion of automotive battery production facilities in Poland, the United States, Canada and China.

We plan to continue to invest in expanding our production facilities and upgrading our equipment and manufacturing processes in order to increase our production capacity, achieve additional economies of scale and support production of new products. We anticipate that our capital expenditures in the remainder of 2023 and 2024 will be used principally for the expansion of automotive battery production facilities in Poland, the United States, Canada and China. See “Business – Production Facilities.”

Our ability to build, operate and maintain additional production capacity and increase or diversify our output is subject to significant risks and uncertainties, which may include delays and cost overruns associated with the build-out of new or upgraded facilities, delays in obtaining necessary government approvals, disruptions of raw material supplies and labor, and equipment malfunctions or breakdowns. In addition, new or upgraded equipment may not perform at expected utilization levels, the yield and product quality of new equipment may differ from design specifications, and modifications may be necessary to correct equipment failing to perform as expected.

In order to finance our production facility expansion, maintenance and upgrading plans, we intend to use cash on hand, funds from operations and debt financing. However, there is no guarantee that we will successfully secure sufficient funds in a timely manner or that loans will be made available on terms commercially acceptable to us and within the limitations imposed by the terms of our existing or any future financings. If we cannot meet our funding needs for our planned capital expenditures, we may have to delay the implementation of our plans to expand production capacity, which may affect our ability to meet future demands, resulting in a decline in profitability and a loss of market share. Additionally, our capital investments are generally made well in advance of any revenue that is generated from making such expenditures. If unforeseen adverse market conditions lead to a decline in demand for our products, which in turn, results in a mismatch between our sales volume and production capacity, or if product prices decline due to oversupply in the market or we encounter production difficulties, we may not be able to recover our capital investments, in part or in full, or the recovery of these investments may take longer than expected, which may have a material adverse effect on our business, financial condition and results of operations.

***Our manufacturing processes are complex and we could experience potential disruptions in operations due to manufacturing difficulties or accidents.***

The manufacturing processes for lithium-ion battery products are highly complex, requiring sophisticated and costly equipment that is periodically modified and upgraded to improve manufacturing yields and product performance, and reduce unit manufacturing costs. These updates may cause production difficulties that could result in delivery delays, reduced output or both. No assurance can be provided that we will not experience manufacturing problems in achieving their target output levels, product delivery delays or both as a result of, among other factors, construction delays, difficulties in upgrading or modifying existing production lines or building new manufacturing plants, difficulties in modifying existing or adopting new manufacturing line technologies or processes or delays in equipment deliveries, any of which could constrain our production capacity and adversely affect our results of operations.

In addition, our manufacturing processes pose certain risks, including industrial accidents or fire, and may result in significant property damage or personal injury. While we have implemented stringent safety procedures in our manufacturing process to minimize such risks, accidents may nonetheless occur. Any such accident may result in significant delays or interruption to our production as well as claims for substantial damages caused by personal injuries or property damage.

***Our strategic acquisitions or investments in joint ventures may not be successful, and we may not realize anticipated strategic benefits and financial returns from such transactions.***

We engage from time to time in acquisitions, joint ventures and other strategic investments in order to expand our production capacity, diversify our product portfolio, gain access to new markets and stable sources of raw materials or acquire new technologies. For instance, in 2020, we established Ultium Cells LLC, a joint venture with GM, to build automotive battery manufacturing facilities in the U.S. to jointly utilize both partners' advanced manufacturing processes, achieve economies of scale and meet demands for GM's growing production of EVs. Its first manufacturing plant in Ohio started mass production in the fourth quarter of 2022 and has an annual production capacity of 40 GWh. Its second manufacturing plant in Tennessee is planned to be completed in 2024. In January 2022, Ultium Cells LLC announced its plans to invest an additional US\$2.6 billion to build its third battery manufacturing facility in Michigan, U.S., which is scheduled to begin mass production in 2024. We also entered into a joint venture with Hyundai Motor Company in August 2021 to mass produce battery cells in Indonesia beginning in the first half of 2024. In April 2022, we established a joint venture with Stellantis N.V. to produce battery cells and modules in Ontario, Canada, which is expected to begin mass production in 2025. In August 2022, we entered into a joint venture with Honda Motor Co. to produce battery cells in Ohio, U.S., and in May 2023, we entered into a joint venture with Hyundai Motor Company to construct a battery cell manufacturing facility in Georgia, U.S. However, there is no guarantee that these joint ventures, or any other future acquisitions or joint ventures will be successful or that we will achieve the anticipated strategic benefits and financial returns from such transactions.

There are various risks associated with our acquisitions and investments, which include the following:

- challenges related to integration of acquired company's or investee's operations into our business;
- substantial delays or reduction in anticipated synergies;
- events beyond our control, including changes in regulations, technology and economic conditions, which could adversely affect our ability to realize benefits and returns from such transactions;
- potential increase in indebtedness that could constrain our operation;
- exposure to unknown or contingent liabilities that could require significant expenditure and capital injections;
- failure to train, motivate, integrate and retain employees of the acquired company or investee;
- diversion of management time and attention from our existing operations to address transactions and challenges therewith or associated with integration processes; and
- unanticipated write-offs or charges, and impairment of goodwill.

Any of the foregoing could have a material adverse effect on our business, financial condition and results of operations. Moreover, joint venture investments may present additional financial, managerial and operational challenges, which could include our inability to require the joint venture to pay

dividends, sell certain assets, return invested capital or take other actions without the consent of our joint venture partners. Our joint venture partners may have economic or business interests that are inconsistent with ours, take actions contrary to our policies or objectives, undergo a change of control, experience financial and other difficulties or be unable or unwilling to fulfill their obligations under the joint ventures. Furthermore, since the success of joint venture transactions are often dependent on the financial condition and performance of partner companies, weak performance of or other problems with such partners may adversely affect the results of such transactions. Our business, financial condition and results of operations may be materially and adversely affected if disagreements or problems develop with our joint venture partners and we are unable to successfully resolve such disagreements or problems.

***Fluctuations of the value of the Won against major foreign currencies may adversely affect our financial results.***

Our consolidated financial statements are prepared from the local currency-denominated financial results, assets and liabilities of us and our subsidiaries around the world, which are then translated as necessary into Won. Accordingly, our consolidated financial results and assets and liabilities may be materially affected by exchange rate fluctuations. A substantial portion of our revenue is denominated in currencies other than the Won, particularly the U.S. dollar, and our purchases of raw materials from overseas suppliers are denominated primarily in U.S. dollars and, to lesser extents, Euros and Japanese Yen. To the extent that we incur costs in one currency and derive revenue in another currency, our results of operations may be affected by the relative strengths of the two currencies. We also have foreign currency borrowings denominated in U.S. dollars and Euros, among others.

Appreciation of the Won against major foreign currencies would result in:

- our exports to be less competitive by raising prices of the products exported from Korea in foreign currency terms; and
- a decline, in Won terms, of our revenue and accounts receivable from overseas sales, which are primarily denominated in U.S. dollars.

Depreciation of the Won against major foreign currencies, on the other hand, results in:

- an increase, in Won terms, in costs and expenses incurred in such foreign currencies, including operating and non-operating costs, such as costs of raw materials purchased from overseas sources, expenses relating to labor, equipment and other manufacturing costs of our overseas operations and a substantial portion of our freight costs, which are denominated principally in U.S. dollars, Chinese Renminbi, Japanese Yen and Euros.
- an increase in the amount of Won required for us to make interest and principal payments on our foreign currency-denominated debt; and
- foreign exchange translation losses on foreign currency-denominated liabilities, which are primarily denominated in Euros and U.S. dollars, which lower our earnings for accounting purposes.

We strive to naturally offset our foreign exchange risk by matching our foreign currency receivables with foreign currency payables as well as enter into derivative contracts including currency forward contracts to further hedge some of our foreign exchange risks. See Note 3.1 of the notes to the 2022/2021 Financial Statements and Note 3.1 of the notes to the Interim Financial Statements included elsewhere in this offering circular. Although the impact of exchange rate fluctuations has in the past been partially mitigated by hedging strategies, our results of operations have historically been affected by exchange rate fluctuations, and there can be no assurance that such strategies will be effective in eliminating or reducing the adverse impact of future fluctuations. Exchange rate fluctuations can also

affect the Won value of our equity investments, as well as monetary assets and liabilities that are denominated in foreign currencies. In general, depreciation of the Won against major foreign currencies such as the Euro and the U.S. dollar could result in a net foreign exchange loss recognized as financial cost as we have a significant amount of foreign-currency denominated borrowings, while such depreciation of the Won could have a positive effect on exchange differences recognized as other non-operating income and expenses as a significant portion of our revenue and accounts receivable are denominated in U.S. dollars. Exchange rate fluctuations have had and may in the future have an adverse impact on our business, financial condition and results of operations.

***Failure to protect our intellectual property rights, trade secrets and unpatented proprietary know-how could impair our competitiveness and impede our business and future prospects.***

We rely on our proprietary technologies and production know-how to maintain our competitive position in the markets in which we operate, and we believe that developing new or improved products or manufacturing or processing technologies that can be differentiated from those of our competitors is an important factor for the continued success of our business. We take active measures to protect our intellectual property by obtaining patents and undertaking monitoring activities in our major markets. However, there can be no guarantee that the measures we undertake will effectively deter competitors from improper use of our proprietary technologies. Our competitors may misappropriate our intellectual property, disputes as to ownership of intellectual property may arise or our intellectual property may otherwise become known or independently developed by our competitors.

We also rely on trade secrets, unpatented proprietary know-how and information, as well as continuing technological innovation in our business. The information we rely upon includes price forecasts, core technology and key customer information. Although we enter into confidentiality agreements with our employees and consultants upon the commencement of an employment or consulting relationship, we cannot provide assurance that they will not be breached. The disclosure of our trade secrets or other know-how as a result of such a breach could adversely affect our business. Also, our competitors may come across or obtain our trade secrets and other proprietary information through a variety of methods. Disputes may arise concerning our trade secrets or the applicability or enforceability of our confidentiality agreements, and there can be no assurance that any such disputes would be resolved in our favor. For example, in 2019, we filed complaints against SK Innovation Co., Ltd. (“SK Innovation”) alleging its misappropriation of our trade secrets and infringement of our patents. In February 2021, the U.S. International Trade Commission ruled in our favor and banned imports of SK Innovation’s battery products into the U.S. In May 2021, we entered into a settlement agreement with SK Innovation for a lump-sum payment of Won 1 trillion and running royalty payments of up to Won 1 trillion to be paid to us by SK Innovation from 2023 onwards, calculated based on SK Innovation’s global battery sales. Following the spin-off of SK on from SK Innovation in October 2021, SK on assumed SK Innovation’s payment obligations under the settlement agreement. Any failure to protect our material intellectual property or unauthorized disclosure of our trade secrets or other unpatented proprietary know-how could impair our competitiveness and harm our business and future prospects.

***We may be exposed to infringement or misappropriation claims by third parties, which, if determined adversely to us, could cause us to lose significant rights and pay substantial damages.***

Our continued success depends on our ability to use and develop our technology and know-how without infringing the intellectual property rights of third parties. The validity and scope of claims relating to battery technologies involve complex scientific, legal and factual questions and analyses and, therefore, may be highly uncertain.

Although we are currently not aware of any parties pursuing or intending to pursue infringement claims against us, there is no guarantee that we will not be subject to such claims in the future. Moreover, as patent applications in many jurisdictions are kept confidential for an extended period before they are published, we may be unaware of pending patent applications by other parties that relate to our technologies, products or processes.

The defense and prosecution of intellectual property suits, patent opposition proceedings and related legal and administrative proceedings can be both costly and time consuming and may significantly divert the efforts and resources of our technical and management personnel. An adverse determination in any such litigation or proceeding to which we may become a party could subject us to significant liability to third parties, require us to seek licenses from third parties, to pay ongoing royalties or to redesign our products or subject us to injunctions prohibiting the manufacture and sale of our products or the use of our technologies. Protracted litigation could also result in our customers deferring or limiting their purchase or use of our products until resolution. The occurrence of any of the foregoing could have a material adverse effect on our business, financial condition and results of operations.

***Our results of operations since 2021 include non-recurring revenue related to the settlement payment received from SK Innovation (or SK on, which assumed SK Innovation's payment obligations in October 2021).***

We filed complaints against SK Innovation in 2019 alleging its misappropriation of our trade secrets and infringement of our patents. Following a final determination by the U.S. International Trade Commission in February 2021 in favor of us, banning imports of SK Innovation's battery products into the U.S., we entered into a settlement agreement with SK Innovation in May 2021 agreeing to settle these claims. Under the settlement agreement, SK Innovation agreed to pay us a lump-sum payment of Won 1 trillion, which was reflected in our financial statements for 2021, and running royalty payments of an aggregate of Won 1 trillion based on SK Innovation's global battery sales starting from 2023. We recognized Won 992 billion of revenue in 2021 as our license revenue for the lump-sum payment of Won 1 trillion after deducting a present value discount. Following the spin-off of SK on from SK Innovation in October 2021, SK on assumed SK Innovation's payment obligations under the settlement agreement.

***We were incorporated in December 2020 when the energy solution business division of LG Chem was split off, and we have a limited operating history as a separate corporate entity.***

We were split off from LG Chem on December 1, 2020, when we were newly incorporated and LG Chem transferred all assets and liabilities related to its energy solution business division, as well as the equity interests of certain subsidiaries, associates and joint ventures engaged in the energy solution business, to us. We issued all of our outstanding shares to LG Chem and became a wholly-owned subsidiary of LG Chem. In January 2022, we issued and sold 34,000,000 shares of our common stock, and LG Chem sold 8,500,000 shares of our common stock, through an initial public offering, representing an aggregate of 18.2% of our total shares after the offering. Accordingly, we have a limited operating history as a separate corporate entity, and you should consider our business in light of the risks and challenges we may encounter as a relatively new enterprise, including our ability to cost-effectively manage and grow our operations.

***We and LG Chem remain jointly and severally liable for each other's liabilities that were incurred prior to the Split-off of us.***

Under the relevant provisions of the Korean Commercial Code relating to split-offs, both the subsidiary and the parent company remain jointly and severally liable after the corporate split-off for all of their liabilities existing prior to the corporate split-off unless such joint and several liability has been successfully eliminated through a special resolution adopted at a general meeting of shareholders and protection procedures for creditors of the affected debt, including consents of such creditors or provision

of sufficient security for dissenting creditors. Accordingly, we and LG Chem remain jointly and severally liable for each other's debts and other liabilities that existed prior to December 1, 2020, which is the record date of the Split-off of us, that currently remain outstanding.

We are the successor-in-title to all the assets and liabilities and rights and obligations that were related to the operations of the energy solutions segment conducted by LG Chem before the Split-off, as well as all authorized licenses, employment relations, contracts and lawsuits that were directly related to such operations. The remaining assets and liabilities and rights and obligations related to other business areas remain with LG Chem, and we remain jointly and severally liable for such liabilities. Defaults by LG Chem of such liabilities, if significant, could have a material adverse effect on our results of operations and financial condition.

***Our success depends on the continuing efforts of our key personnel, and our business may be disrupted if we lose their service.***

Our future success depends to a significant extent on the continued services of our senior management, engineers and technical personnel, and on our ability to continue to attract, train, retain and motivate such key personnel. There is substantial competition both in Korea and overseas for qualified personnel, and there can be no assurance that we will be able to effectively train and retain them or attract qualified replacements. If one or more of our key executive officers, engineers or technicians retire or are unable or unwilling to continue in their present positions, it may be difficult to find and integrate replacement personnel in a timely manner or at all. Any loss or interruption of their services without adequate replacement, or the inability to continually attract new qualified personnel, may have a material adverse effect on our business operations as we may be unable to successfully execute our research, development, production and overall business strategies.

***We are a party and may become a party to various legal proceedings arising in the normal course of business or otherwise, which could be material to our business and reputation.***

We may from time to time become a party to various litigation, arbitration or administrative proceedings arising in the ordinary course of business or otherwise. We are currently involved in various legal proceedings and claims that have not yet been fully resolved, and additional claims may arise in the future. See "Business – Legal Proceedings." Such proceedings are subject to significant uncertainty and may be expensive, time-consuming and disruptive to our operations. An adverse resolution in litigation, arbitration, administrative or other proceedings or actions to which we are a party, could have a material adverse effect on our business, financial condition and results of operations, including as a result of injunctive relief and other non-monetary remedies. Additionally, any amount that we may be required to pay to satisfy a judgment, settlement, fine or penalty may not be covered by our liability insurance policies. Legal proceedings, and any adverse resolution thereof, can also result in adverse publicity and damage to our reputation, which could materially and adversely impact our business.

***A breach in our cybersecurity may result in significant legal and financial exposures, reputational damage and a loss of confidence by our customers.***

We rely on information technology in various aspects of our operations. Our business involves the storage and transmission of data with varying degrees of sensitivity not only about our business, but also our suppliers, business partners and customers. A breach in the cybersecurity of our system could expose us to a risk of loss, the improper use or disclosure of such information, ensuing legal actions or potential liability, any of which could harm our reputation and adversely affect our business. Although we believe that there has been no instance where an unauthorized party was able to obtain access to our data or our customers' data, there can be no assurance that we will not be vulnerable to cyber-attacks in the future. Our information security measures may fail due to external and internal security threats, outages, malicious intrusions and attacks, programming or human errors and malfeasance, or other events.

Our cybersecurity measures may also fail due to employee error, malfeasance or otherwise. Instituting appropriate access controls and safeguards across our information technology infrastructure is challenging. Furthermore, outside parties may attempt to fraudulently induce our employees to disclose sensitive information in order to gain access to our data or our customers' data or accounts or may otherwise obtain access to such data or accounts. Because the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. If an actual or perceived breach of our cybersecurity occurs or the market perception of the effectiveness of our cybersecurity measures is adversely affected, we may incur significant legal and financial exposure, including legal claims and regulatory fines and penalties, damage to our reputation and a loss of confidence of our customers, which could have an adverse effect on our business, financial condition and results of operations.

***Work stoppages and other labor-related issues may adversely affect our operations.***

A significant number of our employees are members of our joint labor union with LG Chem. We annually negotiate a collective bargaining agreement and a wage agreement with the labor union, which were last entered into in December 2022 for the collective bargaining agreement and March 2022 for the wage agreement. Annual wage increases are determined jointly by employee and management representatives in consideration of our performance, the rate of inflation and economic growth in Korea and other relevant factors. We have not experienced any material labor disputes in recent years and consider our current relations with our workforce to be good. However, there can be no assurance that our relationship with our employees will not deteriorate in the future. Any labor unrest, work stoppages or strikes could prevent our production facilities from continuing normal operations, which, in turn, would have a material adverse effect on our business, financial condition and results of operations.

We are also subject to the local labor and employment laws of various jurisdictions outside of Korea in which we operate. Such local labor and employment laws may provide employees with rights of information and consultation regarding specific matters involving their employers' operations and business and may impose restrictions on changes to employment terms, downsizing or closure of facilities and employee terminations, which could impair our flexibility in streamlining or restructuring our current business structures in relevant jurisdictions.

**Risks Relating to Regulations**

***We are subject to stringent environmental regulations that could interrupt our operations or subject us to substantial compliance costs.***

Given our manufacturing presence in Korea, the United States, China and Poland, we are subject to various environmental laws and regulations relating to handling, use, storage, discharge, treatment and disposal of chemicals used and waste substances and other by-products generated from our production activities. We are also subject to periodic monitoring by environmental protection authorities in various jurisdictions. We have incurred, and expect to continue to incur, compliance costs with such environmental laws and regulations. We may become subject to investigations or responsible for remediation of environmental conditions at our production sites, and we may also be subject to associated liabilities as well as regulatory fines and penalties, including liabilities for environmental damage, third-party property damage or personal injury resulting from lawsuits brought by governmental authorities or private litigants.

In order to comply with various environmental laws and regulations in Korea and other jurisdictions, we have installed various types of anti-pollution equipment and implemented processes consistent with industry standards, to minimize energy use and reduce industrial wastes generated at our production facilities. However, no assurance can be provided that environmental claims will not be brought against us and any failure on our part to comply with any present or future environmental laws and regulations could result in assessment of damages, imposition of fines, penalties and clean-up costs, and injunctions, including suspension of our production. In addition, more stringent environmental laws

and regulations could require us to acquire additional anti-pollution equipment or incur other significant compliance expenses. Our non-compliance with the relevant environmental regulations, or the perception that we have not appropriately responded to growing consumer concerns for environmental issues, may adversely affect our reputation, business, financial condition and results of operations. See “Business – Environmental Matters.”

In addition, in January 2021, the National Assembly enacted the Serious Accidents Punishment Act (the “SAPA”) to prevent serious accidents and to protect the safety of the public and workers by punishing the responsible management personnel (the “RMP”) who caused such serious accidents. The SAPA, which became effective in January 2022, imposes direct obligations on the RMP, who has the authority and responsibility to represent the business and to take certain health and safety measures as further elaborated in a presidential decree thereof. The SAPA also obligates businesses to adopt a health and safety system and take other measures to prevent serious workplace accidents and public disasters. If a serious workplace accident occurs and we are found not to be in compliance with its obligations under the SAPA, we and our RMP may be subject to criminal sanctions and, in the case of us, punitive damages, which may adversely affect our reputation, business, financial condition and results of operations.

***Related party transactions are subject to scrutiny by the Korea Fair Trade Commission.***

Our business relationships and transactions with our subsidiaries, affiliates and other members of the LG Group are subject to ongoing scrutiny by the Korea Fair Trade Commission as to, among other things, whether such relationships and transactions constitute undue support among companies of the same business group. We engage in various transactions with our subsidiaries, affiliates and other members of the LG Group, in each case on an arm’s-length basis. See “Certain Relationships and Related Party Transactions.” We are also subject to fair trade regulations limiting cross-guarantees of debt and cross-shareholdings among member companies of the LG Group. In addition, our material business transactions with our subsidiaries, affiliates and member companies of the LG Group are subject to approval by our board of directors pursuant to the Korean Commercial Code and the Monopoly Regulation and Fair Trade Act and are subject to public disclosure requirements under the Monopoly Regulation and Fair Trade Act. Any future determinations by the Korea Fair Trade Commission that we have engaged in transactions that violate the fair trade laws and regulations may result in fines or other punitive measures and may have a material adverse effect on our reputation and our business.

***Related party transactions are subject to scrutiny by the Korean tax authorities.***

Under Korean tax law, there is an inherent risk that our transactions with our subsidiaries, affiliates or other members of the LG Group or any other person or company related to us may be challenged by the Korean tax authorities if such transactions are viewed as having been made on terms that were not on an arm’s-length basis. If any such determination is made by the Korean tax authorities, we would not be permitted to deduct as expenses or would be required to recognize as additional income for tax purposes an amount equivalent to any undue financial support arising from such transactions, which may have adverse tax consequences for us.

***We may be subject to anti-dumping duties, quotas, tariffs or other duties that may have an adverse impact on our export sales.***

As a producer with global sales and operations, we export a significant portion of our products manufactured in Korea, the United States, China and Poland. While we are not currently subject to any substantial quotas, tariffs, anti-dumping duties, safeguard duties or countervailing duties in any market, we may in the future become subject to remedy proceedings in one or more of the jurisdictions in which we operate. Although we continue to carefully monitor developments with respect to trade remedy policies in all of our major markets and plan to limit any potential risk by adjusting supply and export arrangements utilizing our manufacturing facilities in Korea, the United States, China and Poland, there

can be no assurance that quotas, tariffs, anti-dumping duties, safeguard duties or countervailing duties will not be imposed on our sales of products abroad in the future, and the imposition of any such measures against us may have a material adverse impact on our business and performance.

***Our business is subject to the export control regulations of Korea that could affect our operations.***

Certain critical technologies related to our manufacturing of lithium-ion rechargeable batteries have been designated as “national core technologies” under the Act on Prevention of Divulgence and Protection of Industrial Technology and are subject to the export control regulations of Korea. Accordingly, any sale or transfer of these technologies outside of Korea, including a transfer to our joint venture entity, requires the approval by the Ministry of Trade, Industry and Energy, which may delay or interrupt the operations of our joint ventures outside of Korea. In addition, we are required to implement certain measures to protect these technologies as required under the Act on Prevention of Divulgence and Protection of Industrial Technology. Any violation of the relevant regulation could result in fines or other penalties, which could have an adverse effect on our business.

**Risks Relating to Korea**

***If economic conditions in Korea deteriorate, our current business and future growth could be materially and adversely affected.***

We are incorporated in Korea, and a significant portion of our revenue is generated from sales in Korea. As a result, we are subject to economic, political, legal and regulatory risks specific to Korea, and our business, financial condition and results of operations, as well as the successful execution of our operational strategies, are substantially dependent on developments relating to the 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 our control, including developments in the global economy. Any future deterioration of the Korean or global economy could adversely affect our business, financial condition and results of operations.

The economic indicators in Korea in recent years have shown mixed signs of deterioration and recovery. Following a period of deterioration due to the debilitating effects of the COVID-19 pandemic on the Korean economy as well as on the economies of Korea’s major trading partners in 2020, the overall Korean economy showed some signs of recovery in 2021. See “– The global COVID-19 pandemic and any possible occurrences of other types of widespread infectious diseases could materially and adversely affect our business, results of operations or financial condition.” However, adverse conditions and volatility in the worldwide financial markets, fluctuations in oil and commodity prices and the increasing weakness of the global economy, due among others to Russia’s invasion of Ukraine and ensuing sanctions against Russia and, more recently, difficulties faced by several banks in the United States and Europe, have contributed to the uncertainty of global economic prospects in general and have adversely affected the Korean economy, which has been characterized by high levels of uncertainty resulting from high inflation rates, a rise in interest rates and a depreciation of the Won against the U.S. dollar. As a result, future growth of the Korean economy is subject to many factors beyond our control, including developments in the global economy.

Other developments that could have an adverse impact on the Korean economy include:

- declines in consumer confidence and a slowdown in consumer spending, including as a result of severe health epidemics;
- rising inflationary pressures leading to increases in the costs of goods and services and a decrease in purchasing power;
- the occurrence of severe health epidemics in Korea and other parts of the world (such as the global COVID-19 pandemic);

- adverse conditions or developments 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 deteriorating economic and trade relations between the United States and China and increased uncertainties in the global financial markets and industry;
- hostilities, political or social tensions involving Russia (including the invasion of Ukraine by Russia and the 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;
- adverse changes or volatility in foreign currency reserve levels, commodity prices (including oil prices), exchange rates (including fluctuation of the Won against the U.S. dollar, Euro or Japanese Yen exchange rates or revaluation of the Chinese Renminbi), interest rates, inflation rates or stock markets;
- 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;
- increased sovereign default risks in select countries and the resulting adverse effects on the global financial markets;
- 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;
- social and labor unrest;
- substantial changes in the market prices of Korean real estate;
- 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 efforts to provide emergency relief payments to households and emergency loans to corporations in need of funding due to COVID-19, which, together, would likely lead to an increase in the Government's debt and a national budget deficit;
- the economic impact of any pending or future free trade agreements or of any changes to existing free trade agreements;
- 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, allegations of corruption 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;

- geo-political uncertainty and the risk of further attacks by terrorist groups around the world;
- natural or man-made disasters that have a significant adverse economic or other impact on Korea or its major trading partners;
- 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; 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 with North Korea could have an adverse effect on us and the market price of the Notes.***

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, 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. North Korea has increased the frequency of its missile tests since the beginning of 2022, firing numerous ballistic missiles, including intercontinental ballistic missiles. 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 Gaeseong 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. Over the years, the United States and the European Union have also expanded their sanctions applicable to North Korea.
- 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 tensions affecting the Korean peninsula will not

escalate in the future. Any further increase in tensions, which may occur, for example, if North Korea experiences a leadership crisis, high-level contacts between Korea and North Korea break down or military hostilities occur, could have a material adverse effect on the Korean economy and on our business, financial condition and results of operations and the price of the Notes, including a downgrade in our credit rating or the credit ratings of the Notes.

***There are special risks involved with investing in securities of Korean companies, including the possibility of restrictions being imposed by the Government in emergency circumstances as well as accounting and corporate disclosure standards that differ from those in other jurisdictions.***

You should carefully consider the risk factors listed in this section, together with all of the other information included in this offering circular, before you decide to purchase the Notes. As we are a Korean company, there are risks associated with investing in our securities that are not typical for investments in securities of U.S. or European companies. As a Korean company, we operate in a business and cultural environment that is different from that of other countries.

Under the Foreign Exchange Transactions Act of Korea, if the Government determines that certain emergency circumstances, including sudden fluctuations in interest rates or exchange rates, extreme difficulty in stabilizing 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 Economy and Finance for the acquisition of Korean securities or for the repatriation of interest, dividends or sales proceeds arising from Korean securities or from disposition of such securities or other transactions involving foreign exchange.

In addition, we prepare and present our financial statements in accordance with Korean IFRS, which differ in many material respects from accounting principles applicable to companies in certain other countries. We also make regulatory filings and disclosures regarding other aspects of our businesses 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 our company, the terms of the Notes and the financial and other information contained in this offering circular.

***We are incorporated in Korea, and it may be more difficult to enforce judgments of U.S. courts.***

We are a corporation with limited liability organized under the laws of Korea. Most of our directors, executive officers and certain other persons named in this offering circular are non-U.S. residents, and all or a significant portion of the assets of our directors, executive officers and certain other persons named in this offering circular and most of our assets are located or registered outside the United States. As a result, when compared to a U.S. company, it may be more difficult for investors to effect service of process in the United States upon us or to enforce against us, our directors or executive officers, judgments obtained in U.S. courts predicated upon civil liability provisions of the federal or state securities laws of the U.S. or similar judgments obtained in other courts outside Korea. There is doubt as to the enforceability in Korean courts, in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities predicated solely upon the federal and state securities laws of the United States.

## **Risks Relating to the Notes**

***The Notes are unsecured obligations.***

Because the Notes are unsecured obligations, their repayment may be compromised if:

- we enter into bankruptcy, liquidation, rehabilitation or other winding-up proceedings;

- there is a default in payment under our future secured indebtedness or other unsecured indebtedness; or
- there is an acceleration of any of our indebtedness.

If any of these events occurs, our assets may not be sufficient to pay amounts due on any of the Notes. In addition, any secured indebtedness incurred by us would have priority over our unsecured indebtedness to the extent of the assets securing such indebtedness.

***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 except to QIBs in reliance on the exemption provided by Rule 144A, to certain persons in offshore transactions in reliance on Regulation S, or, if available, pursuant to another exemption from, or in another transaction not subject to, the registration requirements of the Securities Act and, in each case, in accordance with applicable state securities laws. In addition, subject to the conditions set forth in the applicable Fiscal Agency Agreement (as defined in “Terms and Conditions of the Notes”), a Note may be transferred only if the principal amount of Notes transferred is at least U.S.\$200,000. For a further discussion of the transfer restrictions applicable to the Notes, see “Terms and Conditions of the Notes” and “Transfer Restrictions.”

The Notes have not been and will not be registered with the Financial Services Commission of Korea under the Financial Investment Services and Capital Markets Act of Korea. Accordingly, the Notes may not be offered or sold, directly or indirectly, in Korea or to 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 by applicable Korean laws and regulations. In addition, during the first year after the issuance of the Notes, the Notes may not be transferred to any resident of Korea other than a “qualified institutional buyer” (a “Korean QIB”, as defined in the Regulation on Securities Issuance, Public Disclosure, Etc. of Korea) who is registered with the Korea Financial Investment Association for Korean QIB bond trading. Furthermore, the Notes acquired by all Korean QIBs at the time of issuance must be no more than 20% of the aggregate principal amount of the Notes.

***The Notes are subject to prescription regulations in Korea.***

Failure to exercise a right of action for more than a certain period of time may operate as a bar to exercise of such right. Under Korean laws, claims against the issuer in respect of the payment of principal of notes or bonds are prescribed upon the expiry of 10 years, and claims for payment of interest in respect of notes or bonds are prescribed upon the expiry of five years, in each case, from the relevant due date as adjusted by any acceleration or otherwise, in respect thereof. If the Holders fail to exercise his or her right of payment for more than the period set forth above, the Korean courts may not enforce a claim for payment for principal or interest in respect of the Notes.

***The Notes contain limited restrictive covenants and will not restrict our ability to make investments, incur unsecured indebtedness or pay dividends.***

The Notes contain limited restrictive covenants and will not restrict our ability to:

- invest in affiliates, associate or subsidiaries;
- repurchase common or preferred shares, make distributions or issue dividends;
- issue preferred securities or incur unsecured indebtedness; or
- make capital expenditures.

Our taking such actions could adversely affect our ability to pay amounts due on the Notes.

***An active trading market for the Notes may not develop.***

The Notes are a new issue of securities for which there is currently no trading market. No assurance can be given that an active trading market for the Notes will develop or as to the liquidity or sustainability of any such market, the ability of holders to sell their Notes or the price at which holders will be able to sell their Notes. The Initial Purchasers are not obliged to make a market in the Notes and any such market making, if commenced, may be discontinued at any time at the sole discretion of the Initial Purchasers.

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;
- our results of operations and financial condition;
- the rate of exchange between Won and the currency of the Notes;
- political and economic developments in and affecting Korea and other regions;
- the market conditions for similar securities; and
- the financial condition and stability of the Korean petrochemical and other sectors.

***The ratings assigned to the Notes may be lowered or withdrawn in the future.***

The Notes are expected to be rated “Baa1” by Moody’s and “BBB+” by S&P. A rating is not a recommendation to buy, sell or hold securities and may be subject to revision, suspension or withdrawal at any time. We cannot assure investors that a rating assigned to the Notes will remain for any given period of time or that a rating assigned to the Notes will not be lowered or withdrawn entirely by the relevant rating agency if in its judgment circumstances in the future so warrant. We have no obligation to inform holders of Notes of any such revision, suspension or withdrawal. A revision, suspension, or withdrawal at any time of a rating assigned to the Notes may adversely affect the market price of the Notes.

***The Notes may not be a suitable investment for all investors seeking exposure to “green” assets.***

We will allocate an amount equivalent to the net proceeds from the issuance of the Notes to finance and/or refinance, in whole or in part, new or existing Eligible Projects (as defined in “Use of Proceeds”) in accordance with our Green Financing Framework, which is in alignment with the Green Bond Principles 2021 published by the International Capital Markets Association and the Green Loan Principles 2023 published by the Loan Market Association. See “Use of Proceeds.” The examples of Eligible Projects provided in “Use of Proceeds” section are for illustrative purposes only and no assurance can be provided that disbursements for projects with these specific characteristics will be made by us during the term of the Notes. Our Green Financing Framework and the Second Party Opinions (as defined in “Use of Proceeds”) are not incorporated into, and do not form a part of, this offering circular.

There is currently no market consensus on what precise attributes are required for a particular project or series of notes to be defined as “green,” and therefore no assurance can be provided to investors that selected Eligible Projects will meet all investor expectations regarding environmental performance. Although the Eligible Projects will be selected in accordance with the categories recognized under our Green Financing Framework, and will be developed in accordance with relevant legislation and standards, there can be no guarantee that the projects will deliver the environmental

benefits as anticipated, or that adverse environmental and/or social impacts will not occur during the design, construction, commissioning and operation of the projects. In addition, where any negative impacts are insufficiently mitigated, the projects may become controversial and may be criticized by activist groups or other stakeholders.

The Second Party Opinions may not reflect the potential impact of all risks related to the structure, market, additional risk factors discussed above and other factors that may affect the value of the Notes. The Second Party Opinions are not a recommendation to buy, sell or hold securities and are only current as of the date that the Second Party Opinions were initially issued. In addition, although we have agreed to certain reporting and use of proceeds obligations in connection with certain environmental criteria, our failure to comply with such obligations does not constitute a breach or an event of default under the Notes. A withdrawal of the Second Party Opinions or any failure by us to use an amount equivalent to the net proceeds from the issuance of the Notes on Eligible Projects or to meet or continue to meet the investment requirements of certain environmentally-focused investors with respect to the Notes may affect the value of the Notes and may have consequences for certain investors with portfolio mandates to invest in “green” assets.

No assurance can be provided by the Company or any of the Initial Purchasers with respect to the suitability of the Second Party Opinions or that the Notes will fulfill the environmental and sustainability criteria to qualify as “green” bonds. The Initial Purchasers have not undertaken, nor are responsible for, any assessment of the eligibility of projects within the definition of Eligible Projects or the monitoring of the use of proceeds from the Offering and therefore no assurance can be provided by the Initial Purchasers that the Green Bond Proceeds will be used for Eligible Projects. Each potential purchaser of Notes should determine for itself the relevance of the information contained in this offering circular regarding the use of proceeds and its purchase of Notes should be based upon such investigation as it deems necessary.

### **Risks Relating to Forward-Looking Statements**

*This offering circular contains forward-looking statements that are our management’s present expectations of future events and are subject to certain factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements.*

In addition to the risks related to our business discussed above, other factors could cause actual results to differ materially from those described in the various forward-looking statements contained in this offering circular. These factors include, but are not limited to, the following:

- general economic, business and political conditions;
- trends in the Korean or global battery industry;
- adverse changes in regulatory, legislative and judicial developments;
- delay or cancellation of our announced or planned production capacity expansion plans abroad;
- market conditions and business outlook for our products;
- future recurrences of COVID-19 or other types of widespread infectious diseases;
- fluctuations in the prices of raw materials;
- declines in consumer confidence and changes in consumer preferences;
- adverse trends in regulatory, legislative and judicial developments;

- the ability of third parties to perform in accordance with contractual terms and specifications;
- changes in interest rates and currency exchange rates;
- our leverage and our ability to meet debt obligations; and
- conditions in the Korean and the global financial markets.

By their nature, certain disclosures relating to these and other risks are only estimates and should one or more of these uncertainties or risks, among others, materialize, actual results may vary materially from those estimated, anticipated or projected, as well as from historical results. Specifically, but without limitation, revenue could decrease, costs (including capital costs) could increase, capital investments could be delayed and anticipated improvements in performance may not be fully realized.

We caution you not to place undue reliance on the forward-looking statements, which speak only as of the date of this offering circular. Except as required by law, we are not under any obligation, and expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

## USE OF PROCEEDS

The net proceeds from the issuance of the 2026 Notes are expected to be U.S.\$396,772,000 and the net proceeds from the issuance of the 2028 Notes are expected to be U.S.\$596,484,000, in each case after deducting a combined management and underwriting commission but not estimated expenses of the Offering. We will allocate an amount equivalent to the net proceeds from the issuance of the Notes (“Green Bond Proceeds”) to finance and/or refinance, in whole or in part, new or existing projects related to (i) low carbon transportation and (ii) energy efficiency (“Eligible Projects”) in accordance with our Green Financing Framework, which is in alignment with the Green Bond Principles 2021 published by the International Capital Markets Association and the Green Loan Principles 2023 published by the Loan Market Association.

Examples of Eligible Projects include the following:

- Low carbon transportation: capital investments for the construction of manufacturing facilities, R&D of batteries for pure electric vehicles, bicycles and motorcycles, capital investments and R&D for waste battery recycling; and
- Energy efficiency: capital investments for the construction of manufacturing facilities for ESS and R&D for ESS design, as well as expenditures aiming to improve the energy efficiency of our corporate and manufacturing facilities or internal supply chain.

### Project Evaluation and Selection Process

Under our project evaluation and selection process, Eligible Projects will be assessed and identified using the criteria indicated above by our Green Financing Working Group, which is composed of various business units. The Green Financing Working Group will review the allocation of the Green Bond Proceeds on an annual basis and ensure that all projects remain aligned with the criteria above.

### Management of Proceeds

The Green Bond Proceeds will be earmarked for allocation within our general account, and our treasury team will track the net proceeds through a separate Green Bond or Loan register, which will be reviewed by the Green Financing Working Group on an annual basis. Any balance of Green Bond Proceeds not yet allocated to Eligible Projects will be held in accordance with our general liquidity management policy and exclusionary policy, and may be invested in cash, cash equivalents, investment grade securities or other marketable securities and short-term instruments or other capital management activities.

### Reporting

Reporting will include allocation reporting and impact reporting and will be publicly available on our website. Allocation reports will be available to investors within approximately one year from the date of issuance of the Notes and annually thereafter until the Green Bond Proceeds have been fully allocated. Until full allocation, we will provide annual impact reports on relevant impact metrics for each category of Eligible Projects on a best efforts basis. We may also elect to publish a report or notice in the event of any material change that would affect the portfolio of Eligible Projects.

DNV Business Assurance Korea Ltd. and Moody’s Investors Service Inc., each an external consultant, issued opinions dated April 28, 2023 and September 4, 2023, respectively, regarding the alignment of the Green Financing Framework with the Green Bond Principles 2021 and the Green Loan Principles 2023 (the “Second Party Opinions”). The Second Party Opinions and our Green Financing Framework are publicly available on the following website: <https://www.lgensol.com/kr/esg-bond>. The Green Financing Framework and the Second Party Opinions are not incorporated into, and do not form part of, this Offering Circular.

## EXCHANGE RATES

The table below sets forth, for the periods and dates indicated, information concerning the Market Average Exchange Rate for U.S. dollars. 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.

<u>Period</u>	<u>At End of Period</u>	<u>Average Rate<sup>(1)</sup></u>	<u>High</u>	<u>Low</u>
		(Won per U.S.\$1.00)		
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 .....	1,267.3	1,292.0	1,436.6	1,185.5
2023 (through September 15) .....	1,326.1	1,298.9	1,341.6	1,219.3
April .....	1,339.9	1,320.0	1,339.9	1,295.4
May .....	1,322.2	1,328.2	1,340.2	1,311.4
June .....	1,312.8	1,296.7	1,321.6	1,273.5
July .....	1,280.0	1,286.3	1,319.4	1,261.6
August .....	1,321.4	1,318.5	1,341.6	1,273.8
September (through September 15) .....	1,326.1	1,327.1	1,334.7	1,319.2

Source: Seoul Money Brokerage Services

(1) Represents the average of the daily Market Average Exchange Rate for U.S. dollars over the relevant period.

## CAPITALIZATION

The following table sets forth our capitalization (defined as the sum of our long-term debt, net of current portion, and our total equity) as of June 30, 2023 on an actual basis and adjusted to give effect to the issuance of the Notes offered hereby.

You should read the information set forth below in conjunction with “Summary Financial Data,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements appearing elsewhere in this offering circular.

	<b>As of June 30, 2023</b>	
	<b>Actual</b>	<b>As adjusted<sup>(1)</sup></b>
	<b>(In billions of Won)</b>	
<b>Long-term debt:</b>		
Long-term borrowings (net of current portion) . . . . .	₩ 4,048	₩ 4,048
Debentures (net of current portion) . . . . .	2,503	2,503
Notes offered hereby . . . . .	–	1,304
<b>Total long-term borrowings</b> . . . . .	<b>6,552</b>	<b>7,855</b>
<b>Equity:</b>		
Share capital . . . . .	117	117
Capital surplus . . . . .	17,165	17,165
Accumulated other comprehensive income . . . . .	665	665
Retained earnings . . . . .	2,089	2,089
Non-controlling interests . . . . .	3,093	3,093
<b>Total equity</b> . . . . .	<b>23,129</b>	<b>23,129</b>
<b>Total capitalization</b> . . . . .	<b>₩ 29,680</b>	<b>₩ 30,984</b>

(1) Reflects net proceeds of U.S.\$993,256,000 from the Offering (after deducting a combined management and underwriting commission but not estimated expenses of the Offering) translated into Won at Won 1,312.8 to U.S.\$1.00, the applicable Market Average Exchange Rates in effect as of June 30, 2023. 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.

There has been no material change in our capitalization since June 30, 2023.

## SELECTED FINANCIAL DATA

The following tables set forth our selected financial data. Our selected financial data as of and for the years ended December 31, 2021 and 2022 set forth below have been derived from the 2022/2021 Financial Statements included elsewhere in this offering circular. Our selected financial data as of and for the six months ended June 30, 2022 and 2023 set forth below have been derived from the Interim Financial Statements included elsewhere in this offering circular. It is important that you read our selected financial data set forth below in conjunction with our consolidated financial statements and the related notes, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and other historical financial information appearing elsewhere in this offering circular. Our consolidated financial statements included in this offering circular have been prepared in accordance with Korean IFRS.

### Selected Consolidated Statements of Comprehensive Income Data

	For the Years Ended December 31,		For the Six Months Ended June 30,	
	2021	2022	2022	2023
	(In billions of Won)		(In billions of Won)	
<b>Revenue</b> . . . . .	₩ 17,852 <sup>(1)</sup>	₩ 25,599	₩ 9,413	₩ 17,521
<b>Cost of sales</b> . . . . .	(13,953)	(21,308)	(7,816)	(14,892)
<b>Gross profit</b> . . . . .	3,899	4,291	1,597	2,628
Other operating income . . . . .	–	–	–	211
Selling and administrative expenses . . . . .	(3,130)	(3,077)	(1,142)	(1,746)
<b>Operating profit</b> . . . . .	768	1,214	454	1,094
Finance income . . . . .	340	386	263	642
Finance costs . . . . .	(295)	(519)	(308)	(483)
Share of loss of associates and joint ventures . . . . .	(12)	(37)	(17)	(18)
Other non-operating income . . . . .	465	1,349	453	724
Other non-operating expenses . . . . .	(489)	(1,398)	(457)	(602)
<b>Profit before income tax</b> . . . . .	777	995	388	1,357
<b>Income tax expense</b> . . . . .	(77)	(215)	(72)	(330)
Profit from continuing operations . . . . .	701	780	317	1,027
Profit from discontinued operations . . . . .	229	–	–	–
<b>Profit for the period</b> . . . . .	₩ 930	₩ 780	₩ 317	₩ 1,027
<b>Other comprehensive income (loss) for the period, net of tax</b> . . . . .	509	(27)	309	453
<b>Total comprehensive income for the period, net of tax</b> . . . . .	₩ 1,438	₩ 752	₩ 626	₩ 1,480

(1) Includes a lump-sum settlement payment of Won 992 billion as our license revenue from SK Innovation Co., Ltd. pursuant to a settlement agreement in May 2021.

## Selected Consolidated Statements of Financial Position Data

	As of December 31,		As of June 30,
	2021	2022	2023
	(In billions of Won)		
<b>Assets</b>			
Current assets:			
Cash and cash equivalents . . . . .	₩ 1,283	₩ 5,938	₩ 4,860
Trade receivables . . . . .	2,914	4,772	5,358
Other receivables . . . . .	815	462	528
Other current financial assets . . . . .	21	9	1
Prepaid income taxes . . . . .	149	46	33
Other current assets . . . . .	457	581	644
Inventories . . . . .	3,896	6,996	7,221
Total current assets . . . . .	9,536	18,804	18,645
Non-current assets:			
Trade receivables . . . . .	₩ 67	₩ 121	₩ 132
Other receivables . . . . .	92	119	376
Other non-current financial assets . . . . .	194	409	536
Investments in associates and joint ventures . . . . .	226	204	226
Deferred tax assets . . . . .	1,855	2,100	2,200
Property, plant and equipment . . . . .	11,051	15,331	19,005
Intangible assets . . . . .	455	642	703
Investment properties . . . . .	224	213	213
Other non-current assets . . . . .	64	357	357
Total non-current assets . . . . .	14,228	19,495	23,749
<b>Total assets</b> . . . . .	₩ 23,764	₩ 38,299	₩ 42,395
<b>Liabilities</b>			
Current Liabilities:			
Trade payables . . . . .	₩ 2,178	₩ 3,842	₩ 4,398
Other payables . . . . .	2,800	2,882	2,546
Borrowings . . . . .	2,203	2,867	2,706
Provisions . . . . .	1,527	977	992
Other current financial liabilities . . . . .	-	4	6
Income tax payables . . . . .	155	173	217
Other current liabilities . . . . .	610	700	441
Total current liabilities . . . . .	9,474	11,445	11,305
Non-current liabilities:			
Other payables . . . . .	₩ 11	₩ 37	₩ 79
Borrowings . . . . .	4,766	5,243	6,635
Other non-current financial liabilities . . . . .	0	1	1
Provisions . . . . .	581	519	775
Net defined benefit liabilities . . . . .	0	0	0
Deferred tax liabilities . . . . .	59	108	91
Other non-current liabilities . . . . .	131	353	379
Total non-current liabilities . . . . .	5,548	6,261	7,961
<b>Total liabilities</b> . . . . .	15,022	17,706	19,266
<b>Equity</b>			
Share capital . . . . .	₩ 100	₩ 117	₩ 117
Capital surplus . . . . .	7,122	17,165	17,165
Accumulated other comprehensive income . . . . .	406	296	665
Retained earnings . . . . .	338	1,155	2,089
<b>Equity attributable to owners of the Parent Company</b> . . . . .	7,966	18,732	20,036
<b>Non-controlling interest</b> . . . . .	776	1,862	3,093
<b>Total equity</b> . . . . .	8,742	20,594	23,129
<b>Total liabilities and equity</b> . . . . .	₩ 23,764	₩ 38,299	₩ 42,395

## Supplemental information

	For the years ended December 31,		For the six months ended June 30,	
	2021	2022	2022	2023
	(In billions of Won)			
Net cash flows provided by (used in) operating activities . . . . .	₩ 979	₩ (580)	₩ (551)	₩ 1,296
Net cash flows used in investing activities . . . . .	(2,178)	(6,259)	(9,045)	(4,306)
Net cash flows provided by (used in) financing activities . . . . .	883	11,415	10,192	1,897

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

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the section titled "Selected Financial Information and Other Operating Information" and our financial statements and related notes thereto included elsewhere in this offering circular. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included elsewhere in this offering circular.*

### Overview

We are one of the largest producers of rechargeable lithium-ion batteries in the world in terms of production capacity as of December 31, 2022 according to BloombergNEF. We offer a wide array of battery products for use in EVs, mobility and IT devices and energy storage systems. Our business comprises all stages of product research and development, manufacturing and sales. Since starting commercial production of lithium-ion batteries in 1999 for the first time in Korea, we have been the pioneer in the global rechargeable battery market with expanding facilities and networks in major hubs across the world. We had operated as the energy solution business division of LG Chem until we were split-off into a wholly-owned subsidiary of LG Chem in December 2020. In January 2022, we issued and sold 34,000,000 shares of our common stock, and LG Chem sold 8,500,000 shares of our common stock, through an initial public offering. Following the offering, LG Chem held 81.8% of our total shares.

Our core product lines are as follows:

- **Advanced Automotive Battery.** We develop and manufacture high-performance rechargeable lithium-ion batteries that power various EVs. These include batteries used in EVs, plug-in hybrid vehicles, hybrid EVs and micro hybrid vehicles.
- **Mobility and IT Battery.** We produce batteries of varying shapes and sizes for use in mobility devices, as well as smartphones, laptops, power tools and other electric devices.
- **Energy Storage System.** Our ESS batteries are used in generators, power grids, commercial and industrial facilities, as well as households, allowing storage and stable stream of power supply.

### Factors Affecting Our Results of Operations and Financial Condition

Our results of operations and financial condition have been, and will continue to be, materially affected by a number of factors and developments, some of which are outside our control, including:

- Global market conditions of the rechargeable battery industry, including government policies affecting EV and renewable energy industries;
- Changes in our sales volume, prices and product mix;
- Changes in the price and availability of raw materials;
- The level of, and returns on, our capital expenditures and production capacity expansion;
- New customer orders and order backlog;
- Product recalls and provisions for warranty expenses;

- Fluctuation in exchange rates of major foreign currencies; and
- Global macroeconomic conditions.

***Global market conditions of the rechargeable battery industry, including government policies affecting EV and renewable energy industries***

We manufacture and sell a broad range of rechargeable lithium-ion batteries used for EVs, mobility and IT devices and ESS. Accordingly, our business is affected by fluctuations in market demand for the products that use our rechargeable batteries, especially EVs, which represent the largest market for our products. Factors such as purchase cost, charging time, cruise range, battery life, and the availability of conveniently-located charging and supporting facilities have affected and will continue to affect the development of the EV industry. The market demand for EVs may fluctuate greatly in the future in light of such factors, which in turn will have a significant impact on demands for our battery products.

The demand for EVs is also sensitive to government regulations and policies relating to the environment or energy, including government subsidies and economic incentives supporting the purchase and use of EVs. Currently, such subsidies and incentives include tax credits or rebates that encourage the purchase of EVs and lower charging rates for electricity, which may be reduced or eliminated or may expire in the future. For example, in August 2022, the United States enacted the IRA, which, among others, provides tax benefits to EVs that meet certain requirements. See “Risk Factors – Our businesses are dependent on a number of industries, including EV, IT and renewable energy, and general conditions in the global economy, and a downturn experienced by any of these industries or the global economy or government policies that affect these industries could adversely affect our business.” In addition, demand for our ESS battery products is affected by government policies relating to power plants and renewable energy generation.

We may also be affected by overcapacity in the rechargeable battery industry. Battery product manufacturers have typically increased their capital investments when demand growth in the end markets that use our battery products is expected. In particular, an increase in global demand for EVs in recent years has led to an increase in global production capacity to manufacture lithium-ion batteries, which is a trend that is expected to continue in the near future. These capital investments to increase global production capacity as well as adoption of new manufacturing technologies may result in increases in the supply of battery products that are not matched by commensurate growth in demand in the end markets for battery products.

***Changes in our sales volume, prices and product mix***

Historically, our sales have been affected primarily by the following factors:

- Sales volume affected by the demand for our products and our capacity to meet that demand;
- Price levels of our products; and
- Our product mix.

Our total sales volume, measured in terms of the aggregate power output of our battery products sold, has continually increased in recent periods, primarily due to the growth in demand for automotive batteries and our capacity expansion.

Our pricing is significantly influenced by general demand in the market segments in which we participate and by the specification of our products, including their energy density, power capacity, weight, lifespan, charging speed, heat resistance, and other performance criteria, as well as delivery requirements and order volume. In general, the average selling prices of lithium-ion batteries have

declined in recent periods and are expected to continually decline with time irrespective of industry-wide cyclical fluctuations as a result of, among other factors, technological advancements, cost reductions and price competition.

In addition, because the prices of different types of battery products vary significantly, the mix of battery products we produce affects our revenue and profitability. We command higher prices for batteries with higher levels of performance, such as high energy density and long lifespan, that are typically used in high-end EVs. Lithium-ion battery products are becoming increasingly diversified in terms of specifications, with customers demanding solutions that are optimized for their particular needs. We strive to mitigate the negative effect of declining average selling prices by offering high quality products tailored to our customers' requirements.

#### ***Changes in the price and availability of raw materials***

The largest component of our cost of sales is raw material cost, accounting for approximately 70% to 80% of our total cost of sales during the period from 2021 to the first six months of 2023. Fluctuations in raw material prices have affected and are expected to continue to affect our results of operations. We typically enter into supply agreements with our key material suppliers for multi-year terms, while each purchase is made through a purchase order at a price that is determined based on the benchmark price of the relevant raw material. The prices of raw materials have fluctuated and will continue to fluctuate, affected by the changes in commodity prices and market supply and demand, and our ability to pass on increases in the cost of raw materials and components to our customers may be limited.

We depend heavily on overseas sources for the raw materials required in the production of lithium-ion batteries. To mitigate any potential interruptions of supplies and the vulnerability of our production schedule, we generally source most of our raw materials as well as key components from multiple suppliers. Additionally, we have made, and continue to make, strategic arrangements, including equity investments and long-term supply agreements, with top suppliers of raw materials. Although we strive to source our key raw material requirements from reliable and competitive suppliers in the domestic and overseas markets, the supply and market price of key raw materials remain subject to a variety of factors that are beyond our control. These may include military conflicts such as the ongoing invasion of Ukraine by Russia, natural disasters, health pandemics such as COVID-19, civil unrest, strikes or trade sanctions or restrictions, including those relating to conflict minerals. For example, in August 2022, the United States enacted the IRA, which placed certain restrictions on the sources of the critical minerals used in LG Energy Solution's products in receiving tax benefits. Any such factor could disrupt our sources of raw materials and have a material adverse effect on our output capacity, and in turn on our business, financial conditions and results of operation.

#### ***The level of, and returns on, our capital expenditures and production capacity expansion***

Our future long-term growth will be dependent on our ability to continue to expand our production capacity and total output beyond current levels. Accordingly, to maintain long-term competitiveness and to continually improve profitability, our business requires a significant amount of capital investments for the maintenance, upgrading and expansion of production facilities and equipment in a timely and cost-efficient manner. Our total capital expenditures, consisting of cash used in acquisition of property, plant and equipment, amounted to Won 3,463 billion in 2021, Won 6,210 billion in 2022 and Won 2,813 billion and Won 4,225 billion in the six months ended June 30, 2022 and 2023, respectively, primarily for the expansion of automotive battery production facilities in Poland, the United States, Canada and China.

We plan to continue to invest in expanding our production facilities and upgrading our equipment and manufacturing processes in order to increase our production capacity, achieve additional economies of scale and support production of new products. When making capital expenditure plans, we continually analyze the allocation of our resources around the world, taking into account factors such as anticipated market demand, location of our key customers, relative currency values and the cost of

goods and labor in various jurisdictions. We anticipate that our capital expenditures in the remainder of 2023 and 2024 will be used principally for the expansion of automotive battery production facilities in Poland, the United States, Canada and China. See “Business – Production Facilities.”

Increased capital expenditures lead to increases in depreciation and amortization expenses as well as financing costs related to such expenditures. The level of capital expenditures we make, as well as the returns we are able to achieve on our capital expenditure investments, have in the past affected and may continue to affect our results of operations and financial condition.

#### ***New customer orders and order backlog***

Our new customer orders and order backlog are closely related to our revenue to be recognized in future periods. Our order backlog represents the amount of customer orders that have not been delivered and recognized as revenue at any given time. We include a new customer order in our backlog at such time as a new contract is entered into or a new purchase order is received, and decrease the backlog amount when we deliver the product to the customer and recognize revenue.

Our supply arrangements with our customers, especially automotive OEMs, are typically long-term multi-year arrangements requiring a complicated and time-consuming research and development process for us to tailor our products to the customers’ specifications. We typically enter into supply arrangements that do not establish fixed pricing and volume commitments for an extended period of time. However, our key customers provide us with rolling forecasts of their product requirements in advance, and they issue purchase orders based on periodic negotiation of purchase price and volume. Our total order backlog amounted to approximately Won 260 trillion, Won 385 trillion and Won 440 trillion as of December 31, 2021, December 31, 2022 and June 30, 2023, respectively.

We believe our order backlog is a key indicator of our future revenue. However, customer orders are subject to cancellations, terminations or modifications and contain other terms and conditions customary in the industry, and our production and delivery may be delayed due to various factors including those beyond our control, which could prevent or delay our order backlog from being converted into revenue.

#### ***Product recalls and provisions for warranty expenses***

If we produce products that do not meet customer specifications or contain defects, we may be faced with warranty claims from our customers and recalls involving our products. For such recalls, we recognize provisions estimated based on the number of vehicles subject to recall, estimated total repair cost and cost sharing arrangement with our customers. We recognized additional provisions for warranty of Won 1,464 billion in 2021, Won 630 billion in 2022 and Won 136 billion and Won 507 billion in the six months ended June 30, 2022 and 2023, respectively, which included costs for voluntary automotive battery recalls and replacement costs for ESS batteries as discussed above. See Note 15 of the notes to the 2022/2021 Financial Statements and Note 15 of the notes to the Interim Financial Statements included elsewhere in this offering circular.

While we have established provisions with respect to potential warranty costs relating to batteries sold to customers as discussed above, there is no guarantee that such provisions will be sufficient to cover all of our warranty costs relating to our batteries. We may also recognize additional provisions for warranty expenses in relation to recalls discussed above or future recalls by our customers. For more information on the recalls discussed above as well as other ongoing recalls, see “Risk Factors– Problems with product quality, including defects, in our products could result in a decrease in customers and sales, recalls and unexpected expenses and loss of market share” and “Risk Factors– Safety and fire risks relating to rechargeable lithium-ion batteries, related recalls and resulting negative publicity may adversely impact our business.”

### ***Fluctuation in exchange rates of major foreign currencies***

Our consolidated financial statements are prepared from the local currency-denominated financial results, assets and liabilities of us and our subsidiaries around the world, which are then translated as necessary into Won. Accordingly, our consolidated financial results and assets and liabilities may be materially affected by exchange rate fluctuations. A substantial portion of our revenue is denominated in currencies other than the Won, particularly the U.S. dollar, and our purchases of raw materials from overseas suppliers are denominated primarily in U.S. dollars and, to a lesser extent, Euros and Japanese Yen. To the extent that we incur costs in one currency and derive revenue in another currency, our results of operations may be affected by the relative strengths of the two currencies. We also have foreign currency borrowings denominated in U.S. dollar and Euro, among others. See “Risk Factors—Risks Relating to Our Business—Fluctuations of the value of the Won against major foreign currencies may adversely affect our financial results.”

We strive to naturally offset our foreign exchange risk by matching our foreign currency receivables with foreign currency payables as well as enter into derivative contracts including currency forward contracts to further hedge some of our foreign exchange risks. See Note 3.1 of the notes to the 2022/2021 Financial Statements and Note 3.1 of the notes to the Interim Financial Statements included elsewhere in this offering circular.

Although the impact of exchange rate fluctuations has in the past been partially mitigated by hedging strategies, our results of operations have historically been affected by exchange rate fluctuations, and there can be no assurance that such strategies will be effective in eliminating or reducing the adverse impact of future fluctuations. Exchange rate fluctuations can also affect the Won value of our equity investments, as well as monetary assets and liabilities that are denominated in foreign currencies. In general, depreciation of the Won against major foreign currencies such as the Euro and the U.S. dollar could result in a net foreign exchange loss recognized as financial cost as we have a significant amount of foreign-currency denominated borrowings, while such depreciation of the Won could have a positive effect on exchange differences recognized as other non-operating income and expenses as a significant portion of our revenue and accounts receivable are denominated in U.S. dollars. See “—Quantitative and Qualitative Disclosures about Market Risk—Foreign Exchange Risk.” Exchange rate fluctuations have had and may in the future have an adverse impact on our business, financial condition and results of operations.

### ***Macroeconomic conditions***

EV, IT and renewable energy industries that use our battery products are sensitive to general conditions in the global economy. Macroeconomic factors, such as the economic growth rate, employment levels, interest rates, inflation rates, exchange rates, commodity prices, demographic trends and fiscal policies of governments can all have a significant, albeit to varying degrees, effect on such industries. In times of recessions, orders for our products may decrease and we may need to adjust our production levels and pricing. Uncertainties in the global economy have increased in recent years, with the global financial and capital markets experiencing substantial volatility. In particular, the COVID-19 pandemic had materially and adversely affected the global economy and financial markets.

### **Critical Accounting Policies**

We have prepared our consolidated financial statements in accordance with Korean IFRS. The preparation of our financial statements requires us to make difficult, complex and subjective judgments in making the appropriate estimates and assumptions that affect the amounts reported in our financial statements. These judgments are based on our historical experience, and while we believe our estimates and judgments are reasonable under the circumstances in which they were made, there can be no assurance that our judgments will prove to be correct or that actual results reported in future periods will not differ from our expectations reflected in our accounting treatment of certain items. For further

information regarding our significant accounting policies, see Notes 2 and 4 of the notes to the 2022/2021 Financial Statements and the notes to the Interim Financial Statements included elsewhere in this offering circular.

### Recent Accounting Changes

For information regarding our recent adoption of new standards, interpretations and amendments to Korean IFRS, see Note 2.2 of the notes to the 2022/2021 Financial Statements and the notes to the Interim Financial Statements included elsewhere in this offering circular.

### Results of Operations – First Six Months of 2023 Compared to the First Six Months of 2022

The following table presents our selected consolidated statements of profit or loss data and changes therein for the six months ended June 30, 2022 and 2023.

	For the Six Months Ended June 30,		Changes	
			6M 2022 versus 6M 2023	
	2022	2023	Amount	%
	(In billions of Won)			
Revenue . . . . .	₩ 9,413	₩ 17,521	₩ 8,108	86.1%
Cost of sales . . . . .	(7,816)	(14,892)	(7,076)	90.5
Gross profit . . . . .	1,597	2,628	1,031	64.6
Other operating income . . . . .	–	211	211	N.A.
Selling and administrative expenses . . . . .	(1,142)	(1,746)	(604)	52.9
Operating profit . . . . .	454	1,094	640	141.0
Finance income . . . . .	263	642	379	144.1
Finance costs . . . . .	(308)	(483)	(175)	56.8
Share of loss of associates and joint ventures . . . . .	(17)	(18)	(1)	5.9
Other non-operating income . . . . .	453	724	271	59.8
Other non-operating expenses . . . . .	(457)	(602)	(145)	31.7
Profit before income tax . . . . .	388	1,357	969	249.7
Income tax expense . . . . .	(72)	(330)	(258)	358.3
Profit for the period . . . . .	₩ 317	₩ 1,027	710	224.0

Note: N.A. means not applicable.

### Revenue

Our revenue increased by 86.1% from Won 9,413 billion in the six months ended June 30, 2022 to Won 17,521 billion in the six months ended June 30, 2023, primarily due to an increase in the sales volume of our automotive battery products, which was mainly driven by a strong growth in demand for electric vehicles due to government policies and subsidies favoring environment-friendly vehicles in major markets, particularly in Europe and the United States, among other reasons, as well as an increase in the average sales price of our products.

### Cost of Sales and Gross Profit

Our cost of sales increased by 90.5% from Won 7,816 billion in the six months ended June 30, 2022 to Won 14,892 billion in the six months ended June 30, 2023, primarily due to an increase in the volume of raw materials and consumables used, mainly reflecting the overall growth in the sales volume of our automotive battery products as discussed above, increases in raw material prices and logistics expenses as well as increased costs in connection with the operations of our expanded production facilities and related depreciation.

As a result of the factors described above, our gross profit increased by 64.6% from Won 1,597 billion in the six months ended June 30, 2022 to Won 2,628 billion in the six months ended June 30, 2023. Our gross profit margin, or gross profit as a percentage of total revenue, decreased from 17.0% in the six months ended June 30, 2022 to 15.0% in the six months ended June 30, 2023.

### ***Other Operating Income***

We recognized other operating income of Won 211 billion in the six months ended June 30, 2023 compared to no such income in the six months ended June 30, 2022, reflecting the amount of tax credits that we expect to receive through the IRA, which came into effect on January 1, 2023.

### ***Selling and Administrative Expenses***

The following table presents a breakdown of our selling and administrative expenses for the six months ended June 30, 2022 and 2023.

	For the Six Months Ended June 30,		Changes	
			6M 2022 versus 6M 2023	
	2022	2023	Amount	%
	(In billions of Won)			
Wages and salaries . . . . .	₩ 331	₩ 414	₩ 83	25.1%
Retirement benefits . . . . .	21	15	(6)	(28.6)
Employee benefits . . . . .	69	100	31	44.9
Travel expenses . . . . .	22	27	5	22.7
Water and utilities . . . . .	21	34	13	61.9
Rental expenses . . . . .	27	39	12	44.4
Commission expenses . . . . .	178	249	71	39.9
Depreciation . . . . .	66	84	18	27.3
Advertising expenses . . . . .	9	10	1	11.1
Freight expenses . . . . .	107	60	(47)	(43.9)
Training expenses . . . . .	8	16	8	100.0
Amortization . . . . .	30	47	17	56.7
Sample expenses . . . . .	2	3	1	50.0
Development costs . . . . .	58	89	31	53.4
Addition of warranty provisions . . . . .	94	507	413	439.4
Others . . . . .	101	51	(50)	(49.5)
Selling and administrative expenses . . . . .	<u>₩ 1,142</u>	<u>₩ 1,746</u>	604	52.9

Our selling and administrative expenses increased by 52.9% from Won 1,142 billion in the six months ended June 30, 2022 to Won 1,746 billion in the six months ended June 30, 2023, primarily due to a 439.4% increase in our addition of warranty provisions from Won 94 billion in the six months ended June 30, 2022 to Won 507 billion in the six months ended June 30, 2023, which mainly reflected an increase in provisions for warranty expense relating to the recalls of certain electric vehicles for which we supplied batteries, which in turn was due primarily to an increase globally in the cost of raw materials. Such increase was enhanced by a 25.1% increase in our wages and salaries from Won 331 billion in the six months ended June 30, 2022 to Won 414 billion in the six months ended June 30, 2023, which was mainly due to an increase in the number of our employees and an increase in our average wages, and a 39.9% increase in our commission expenses from Won 178 billion in the six months ended June 30, 2022 to Won 249 billion in the six months ended June 30, 2023, which primarily reflected increases in legal and other service-related fees.

### ***Operating Profit and Operating Margin***

Due to the factors described above, our operating profit increased by 141.0% from Won 454 billion in the six months ended June 30, 2022 to Won 1,094 billion in the six months ended June 30, 2023. Our operating profit margin, or operating profit as a percentage of total revenue, increased from 4.8% in the six months ended June 30, 2022 to 6.2% in the six months ended June 30, 2023.

## Finance Income and Costs

The following table presents a breakdown of our finance income and costs and changes therein for the six months ended June 30, 2022 and 2023.

	For the Six Months Ended June 30,		Changes	
			6M 2022 versus 6M 2023	
	2022	2023	Amount	%
(In billions of Won)				
<b>Finance income</b>				
Interest income . . . . .	₩ 71	₩ 82	₩ 11	15.5%
Dividends income . . . . .	–	0	0	N.A.
Exchange differences . . . . .	127	521	394	310.2
Gain on derivative instruments . . . . .	65	40	(25)	(38.5)
Finance income . . . . .	<u>₩ 263</u>	<u>₩ 642</u>	379	144.1
<b>Finance costs</b>				
Interest expense . . . . .	₩ 38	₩ 134	₩ 96	252.6%
Exchange differences . . . . .	270	344	74	27.4
Loss on disposal of trade receivables . . . . .	–	5	5	N.A.
Loss on derivative instruments . . . . .	0	–	0	N.A.
Finance costs . . . . .	<u>₩ 308</u>	<u>₩ 483</u>	175	56.8

Note: N.A. means not applicable.

Our finance income increased by 144.1% from Won 263 billion in the six months ended June 30, 2022 to Won 642 billion in the six months ended June 30, 2023, primarily due to a significant increase in exchange differences from Won 127 billion in the six months ended June 30, 2022 to Won 521 billion in the six months ended June 30, 2023, which was slightly offset by a 38.5% decrease in gain on derivative instruments from Won 65 billion in the six months ended June 30, 2022 to Won 40 billion in the six months ended June 30, 2023.

Our finance costs increased by 56.8% from Won 308 billion in the six months ended June 30, 2022 to Won 483 billion in the six months ended June 30, 2023, primarily due to a 252.6% increase in interest expense from Won 38 billion in the six months ended June 30, 2022 to Won 134 billion in the six months ended June 30, 2023, which was enhanced by a 27.4% increase in exchange differences from Won 270 billion in the six months ended June 30, 2022 to Won 344 billion in the six months ended June 30, 2023.

On a net basis, our net gain (loss) on exchange differences changed from a net loss of Won 143 billion in the six months ended June 30, 2022 to a net gain of Won 177 billion in the six months ended June 30, 2023, mainly due to fluctuations of the Won against the US\$ for our Korean entity's deposits and borrowings and the Polish złoty against the Euro for our Poland entity's borrowings. In terms of the Market Average Exchange Rate, the Won depreciated from Won 1,185.5 to US\$1.00 as of December 31, 2021 to Won 1,292.9 to US\$1.00 as of June 30, 2022, while it depreciated from Won 1,267.3 to US\$1.00 as of December 31, 2022 to Won 1,312.8 to US\$1.00 as of June 30, 2023. In addition, the average value of the Market Average Exchange Rate depreciated from Won 1,232.9 to US\$1.00 in the six months ended June 30, 2022 to Won 1,295.0 to US\$1.00 in the six months ended June 30, 2023.

In addition, on a net basis, our net gain on derivative instruments decreased by 38.5% from Won 65 billion in the six months ended June 30, 2022 to Won 40 billion in the six months ended June 30, 2023, mainly as a result of a decrease in gain on derivative instruments held by us, as most of the currency forward agreements we entered into in the six months ended June 30, 2022 to hedge against foreign currency risks expired in the six months ended June 30, 2023.

Our net interest income (expense) changed from a net interest income of Won 33 billion in the six months ended June 30, 2022 to a net interest expense of Won 52 billion in the six months ended June 30, 2023. Such change was principally attributable to an increase in interest expense, which in turn was the result of an increase in interest on financial institutions. See Note 24 of the notes to our Interim Financial Statements.

#### *Share of Loss of Associates and Joint Ventures*

Our share of loss of associates and joint ventures increased by 5.9% from Won 17 billion in the six months ended June 30, 2022 to Won 18 billion in the six months ended June 30, 2023. See Note 10 of the notes to our Interim Financial Statements.

#### *Other Non-Operating Income and Expenses*

The following table presents a breakdown of our other non-operating income and other non-operating expenses for the six months ended June 30, 2022 and 2023.

	For the Six Months Ended June 30,		Changes	
			6M 2022 versus 6M 2023	
	2022	2023	Amount	%
	(In billions of Won)			
<b>Other non-operating income</b>				
Exchange differences . . . . .	₩ 408	₩ 706	₩ 298	73.0%
Gain on disposal of property, plant and equipment . . .	1	1	–	0.0
Others . . . . .	45	17	(28)	(62.2)
Other non-operating income . . . . .	<u>₩ 453</u>	<u>₩ 724</u>	271	59.8
<b>Other non-operating expenses</b>				
Exchange differences . . . . .	₩ 410	₩ 518	₩ 108	26.3%
Loss on disposal of property, plant and equipment . . .	17	42	25	147.1
Loss on disposal of intangible assets . . . . .	0	0	0	N.A.
Impairment of investments in associates and joint ventures . . . . .	–	15	15	N.A.
Donations . . . . .	1	4	3	300.0
Others . . . . .	28	23	(5)	(17.9)
Other non-operating expenses . . . . .	<u>₩ 457</u>	<u>₩ 602</u>	145	31.7

Note: N.A. means not applicable.

Our other non-operating income increased by 59.8% from Won 453 billion in the six months ended June 30, 2022 to Won 724 billion in the six months ended June 30, 2023, which was principally attributable to a 73.0% increase in exchange differences from Won 408 billion in the six months ended June 30, 2022 to Won 706 billion in the six months ended June 30, 2023.

Our other non-operating expenses increased by 31.7% from Won 457 billion in the six months ended June 30, 2022 to Won 602 billion in the six months ended June 30, 2023, which was principally attributable to a 26.3% increase in exchange differences from Won 410 billion in the six months ended June 30, 2022 to Won 518 billion in six months ended June 30, 2023.

On a net basis, we recorded a net gain on exchange differences of Won 188 billion in the six months ended June 30, 2023, compared to a net loss on exchange differences of Won 2 billion in the six months ended June 30, 2022, which was primarily attributable to fluctuations of the Won against the US\$ for our Korean entity's deposits and borrowings and the Polish zloty against the Euro for our Poland entity's borrowings.

### ***Profit Before Income Tax Expense***

As a result of the reasons discussed above, our profit before income tax expense increased by 249.7% from Won 388 billion in the six months ended June 30, 2022 to Won 1,357 billion in the six months ended June 30, 2023.

### ***Income Tax Expense***

Our income tax expense increased by 358.3% from Won 72 billion in the six months ended June 30, 2022 to Won 330 billion in the six months ended June 30, 2023. Such increase was primarily due to an increase in profit before income tax expense, as discussed above.

### ***Profit for the Period***

Primarily due to the factors described above, our profit for the period increased by 224.0% from Won 317 billion in the six months ended June 30, 2022 to Won 1,027 billion in the six months ended June 30, 2023. Our profit for the period as a percentage of total revenue (or net margin) increased from 3.4% in the six months ended June 30, 2022 to 5.9% in the six months ended June 30, 2023.

## **Results of Operations – 2022 Compared to 2021**

The following table presents our selected consolidated statements of profit or loss data and changes therein for 2021 and 2022.

	For the Year Ended December 31,		Changes	
			2021 versus 2022	
	2021	2022	Amount	%
	(In billions of Won)			
Revenue . . . . .	₩ 17,852	₩ 25,599	₩ 7,747	43.4%
Cost of sales . . . . .	(13,953)	(21,308)	(7,355)	52.7
Gross profit . . . . .	3,899	4,291	392	10.1
Selling and administrative expenses . . . . .	(3,130)	(3,077)	53	(1.7)
Operating profit . . . . .	768	1,214	446	58.1
Finance income . . . . .	340	386	46	13.5
Finance costs . . . . .	(295)	(519)	(224)	75.9
Share of loss of associates and joint ventures . . . . .	(12)	(37)	(25)	208.3
Other non-operating income . . . . .	465	1,349	884	190.1
Other non-operating expenses . . . . .	(489)	(1,398)	(909)	185.9
Profit before income tax . . . . .	777	995	218	28.1
Income tax expense . . . . .	(77)	(215)	(138)	179.2
Profit from continuing operations . . . . .	701	780	79	11.3
Profit from discontinued operations . . . . .	229	–	(229)	N.A.
Profit for the year . . . . .	₩ 930	₩ 780	(150)	(16.1)

Note: N.A. means not applicable.

### ***Revenue***

Our revenue increased by 43.4% from Won 17,852 billion in 2021 to Won 25,599 billion in 2022, primarily due to an increase in the sales volume of our automotive battery products, which was mainly driven by a strong growth in demand for EVs due to government policies and subsidies favoring environment-friendly vehicles in major markets, particularly in the United States and China, among other reasons, as well as an increase in the average sales price of our products.

### Cost of Sales and Gross Profit

Our cost of sales increased by 52.7% from Won 13,953 billion in 2021 to Won 21,308 billion in 2022, primarily due to increases in raw material prices and logistics expenses, an increase in the volume of raw materials and consumables used, mainly reflecting the overall growth in the sales volume of our automotive battery products as discussed above as well as increased costs in connection with the operations of our expanded production facilities and related depreciation.

As a result of the factors described above, our gross profit increased by 10.1% from Won 3,899 billion in 2021 to Won 4,291 billion in 2022. Our gross profit margin, or gross profit as a percentage of total revenue, decreased from 21.8% in 2021 to 16.8% in 2022.

### Selling and Administrative Expenses

The following table presents a breakdown of our selling and administrative expenses and changes therein for 2021 and 2022.

	For the Year Ended		Changes	
	December 31,		2021 versus 2022	
	2021	2022	Amount	%
	(In billions of Won)			
Wages and salaries . . . . .	₩ 517	₩ 804	₩ 287	55.5%
Retirement benefits . . . . .	36	42	6	16.7
Employee benefits . . . . .	114	153	39	34.2
Travel expenses. . . . .	26	51	25	96.2
Water and utilities . . . . .	30	49	19	63.3
Packaging expenses . . . . .	1	8	7	700.0
Rental expenses. . . . .	50	68	18	36.0
Commission expenses . . . . .	314	482	168	53.5
Depreciation . . . . .	103	140	37	35.9
Advertising expenses . . . . .	13	18	5	38.5
Freight expenses . . . . .	154	234	80	51.9
Training expenses . . . . .	11	22	11	100.0
Amortization. . . . .	46	66	20	43.5
Sample expenses . . . . .	5	3	(2)	(40.0)
Development costs. . . . .	107	135	28	26.2
Addition of warranty provisions . . . . .	1,464	630	(834)	(57.0)
Others . . . . .	139	172	33	23.7
Selling and administrative expenses . . . . .	<u>₩ 3,130</u>	<u>₩ 3,077</u>	(53)	(1.7)

Our selling and administrative expenses decreased by 1.7% from Won 3,130 billion in 2021 to Won 3,077 billion in 2022, primarily due to a 57.0% decrease in our addition of warranty provisions from Won 1,464 billion in 2021 to Won 630 billion in 2022, which primarily reflects a decrease in provisions for warranty expense relating to the recalls of certain EVs for which we supplied batteries, which was mostly offset by the following:

- a 55.5% increase in our wages and salaries from Won 517 billion in 2021 to Won 804 billion in 2022, primarily due to an increase in the number of our employees and a general increase in average wages paid to our employees;
- a 53.5% increase in our commission expenses from Won 314 billion in 2021 to Won 482 billion in 2022, which was primarily due to increases in our legal and other advisory service fees; and
- a 51.9% increase in our freight expenses from Won 154 billion in 2021 to Won 234 billion in 2022, which was primarily due to an increase in the sales volume of our products as well as an increase in global freight rates.

### **Operating Profit and Operating Margin**

Due to the factors described above, our operating profit increased by 58.1% from Won 768 billion in 2021 to Won 1,214 billion in 2022. Our operating profit margin, or operating profit as a percentage of total revenue, increased from 4.3% in 2021 to 4.7% in 2022.

### **Finance Income and Costs**

The following table presents a breakdown of our finance income and costs and changes therein for 2021 and 2022.

	For the Year Ended December 31,		Changes	
			2021 versus 2022	
	2021	2022	Amount	%
(In billions of Won)				
<b>Finance income</b>				
Interest income . . . . .	₩ 22	₩ 153	₩ 131	595.5%
Exchange differences . . . . .	188	197	9	4.8
Gain on derivative instruments . . . . .	130	36	(94)	(72.3)
Finance income . . . . .	<u>₩ 340</u>	<u>₩ 386</u>	46	13.5
<b>Finance costs</b>				
Interest expense . . . . .	₩ 67	₩ 114	₩ 47	70.1%
Exchange differences . . . . .	228	378	150	65.8
Loss on disposal of trade receivables . . . . .	1	3	2	200.0
Loss on derivative instruments . . . . .	0	24	24	N.A.
Finance costs . . . . .	<u>₩ 295</u>	<u>₩ 519</u>	224	75.9

Note: N.A. means not applicable.

Our finance income increased by 13.5% from Won 340 billion in 2021 to Won 386 billion in 2022, primarily due to a significant increase in interest income from Won 22 billion in 2021 to Won 153 billion in 2022, which was partially offset by a 72.3% decrease in gain on derivative instruments from Won 130 billion in 2021 to Won 36 billion in 2022.

Our finance costs increased by 75.9% from Won 295 billion in 2021 to Won 519 billion in 2022, primarily due to a 65.8% increase in exchange differences from Won 228 billion in 2021 to Won 378 billion in 2022, which was enhanced by a 70.1% increase in interest expense from Won 67 billion in 2021 to Won 114 billion in 2022.

On a net basis, our net loss on exchange differences increased by 352.5% from Won 40 billion in 2021 to Won 181 billion in 2022, in the context of a depreciating environment for the Won against the U.S. dollar. In terms of the Market Average Exchange Rate, the Won depreciated from Won 1,088.0 to US\$1.00 as of December 31, 2020 to Won 1,185.5 to US\$1.00 as of December 31, 2021 and further depreciated to Won 1,267.3 to US\$1.00 as of December 31, 2022. In addition, the average value of the Market Average Exchange Rate depreciated from Won 1,144.4 to US\$1.00 in 2021 to Won 1,292.0 to US\$1.00 in 2022.

In addition, on a net basis, our net gain on derivative instruments decreased by 90.8% from Won 130 billion in 2021 to Won 12 billion in 2022, mainly as a result of a decrease in gain on derivative instruments held by us, as certain of the currency forward agreements we entered into in 2021 to hedge against foreign currency risks expired in 2022.

Our net interest income (expense) changed from a net interest expense of Won 45 billion in 2021 to a net interest income of Won 39 billion in 2022. Such change was principally attributable to the receipt of Won 10,096 billion of proceeds from the initial public offering of our common shares in January 2022.

### ***Share of Loss of Associates and Joint Ventures***

Our share of loss of associates and joint ventures increased by 208.3% from Won 12 billion in 2021 to Won 37 billion in 2022, primarily due to an increase in our share of loss related to PT. HLI Green Power in 2022 compared to 2021. See Note 10 of the notes to our 2022/2021 Financial Statements.

### ***Other Non-Operating Income and Expenses***

The following table presents a breakdown of our other non-operating income and other non-operating expenses and changes therein for 2021 and 2022.

	For the Year Ended December 31,		Changes	
			2021 versus 2022	
	2021	2022	Amount	%
(In billions of Won)				
<b>Other non-operating income</b>				
Exchange differences . . . . .	₩ 428	₩ 1,295	₩ 867	202.6%
Gain on disposal of property, plant and equipment . . .	6	1	(5)	(83.3)
Gain on disposal of investments in associates . . . . .	4	–	(4)	N.A.
Others . . . . .	27	54	27	100.0
Other non-operating income . . . . .	<u>₩ 465</u>	<u>₩ 1,349</u>	884	190.1
<b>Other non-operating expenses</b>				
Exchange differences . . . . .	₩ 437	₩ 1,293	₩ 856	195.9%
Loss on disposal of property, plant and equipment . . .	41	62	21	51.2
Loss on disposal of intangible assets . . . . .	0	0	0	N.A.
Donations . . . . .	3	2	(1)	(33.3)
Others . . . . .	9	41	32	355.6
Other non-operating expenses . . . . .	<u>₩ 489</u>	<u>₩ 1,398</u>	909	185.9

Note: N.A. means not applicable.

Our other non-operating income increased by 190.1% from Won 465 billion in 2021 to Won 1,349 billion in 2022, which was principally attributable to a 202.6% increase in exchange differences from Won 428 billion in 2021 to Won 1,295 billion in 2022.

Our other non-operating expenses increased by 185.9% from Won 489 billion in 2021 to Won 1,398 billion in 2022, which was principally attributable to a 195.9% increase in exchange differences from Won 437 billion in 2021 to Won 1,293 billion in 2022.

On a net basis, we recorded a net gain on exchange differences of Won 2 billion in 2022, compared to a net loss on exchange differences of Won 9 billion in 2021, which was primarily attributable to the depreciation of the Won against the U.S. dollar in 2022 compared to 2021, as discussed above.

### ***Profit Before Income Tax Expense***

As a result of the reasons discussed above, our profit before income tax expense increased by 28.1% from Won 777 billion in 2021 to Won 995 billion in 2022.

### ***Income Tax Expense***

Our income tax expense increased by 179.2% from Won 77 billion in 2021 to Won 215 billion in 2022. While our income tax expense in 2022 was in line with applicable tax rates, we benefited from tax loss carryforwards relating to our subsidiary in Poland in 2021, as such subsidiary began to generate taxable income in such year. The increase in our income tax expense was mainly due to (i) a decrease in our tax credits from Won 142 billion in 2021 to Won 38 billion in 2022, mainly because we were not able to receive certain foreign tax credits and investment tax credits in Korea that we had previously

received, as our Korean entity experienced a net loss in 2022 on a separate basis, (ii) a decrease in the tax benefit from deferred tax recognition on temporary differences in prior periods from Won 128 billion in 2021 to Won 48 billion in 2022 and (iii) a change in the effect of the non-recognition of deferred tax on temporary differences from a tax benefit of Won 7 billion in 2021 to a tax loss of Won 59 billion in 2022. Such effects were partially offset by a tax benefit from changes of deferred tax due to tax credits carryforwards of Won 189 billion in 2022 compared to no such tax benefit in 2021. Primarily due to such factors, our effective tax rate was 9.85% and 21.65% in 2021 and 2022, respectively. See Note 27 of the notes to our 2022/2021 Financial Statements.

#### ***Profit from Continuing Operations***

Primarily due to the factors described above, our profit for the period from continuing operations increased by 11.3% from Won 701 billion in 2021 to Won 780 billion in 2022. Our profit for the period from continuing operations as a percentage of total revenue decreased from 3.9% in 2021 to 3.0% in 2022.

#### ***Profit from Discontinued Operations***

Our profit from discontinued operations was nil in 2022, compared to Won 229 billion in 2021. The profit from discontinued operations in 2021 reflects the profit from the LCD polarizer business, which we disposed of in the first half of 2021.

#### ***Profit for the Period***

Primarily due to the factors described above, our profit for the period decreased by 16.1% from Won 930 billion in 2021 to Won 780 billion in 2022. Our profit for the period as a percentage of total revenue (or net margin) decreased from 5.2% in 2021 to 3.0% in 2022.

### **Liquidity and Capital Resources**

#### ***Liquidity***

Our principal sources of cash have historically been:

- cash generated by our operations, principally from sales of products; and
- proceeds from issuances of debentures as well as short-term and long-term borrowings.

Our principal cash requirements or uses have historically been:

- cash required for our operations, including purchases of raw materials, employee costs, research and development expenses and commission expenses;
- capital expenditures for property, plant and equipment;
- interest and principal payments on our debentures and short-term and long-term borrowings; and
- investments in strategic joint ventures and other affiliates.

We had net working capital (defined as current assets net of current liabilities) of Won 62 billion as of December 31, 2021, Won 7,359 billion as of December 31, 2022 and Won 7,340 billion as of June 30, 2023. Our holdings of cash and cash equivalents were Won 1,283 billion as of December 31, 2021, Won 5,938 billion as of December 31, 2022 and Won 4,860 billion as of June 30, 2023. The sharp increase in our cash and cash equivalents in 2022 reflected the proceeds from the initial public offering of our common shares in January 2022. We manage our liquidity risk to maintain adequate levels of

working capital by continually monitoring projected cash flows. We also aim to mitigate liquidity risk by contracting with financial institutions with respect to bank overdrafts and banking facility agreements in order to ensure the availability of sufficient funds.

We believe that cash from our operations, current and future financing arrangements (including issuances of debentures, short-term and long-term borrowings) and existing cash and cash equivalents are likely to be sufficient to satisfy our operating cash requirements, capital expenditure needs and debt service requirements for the foreseeable future.

We strive to maintain a sound capital structure, and we monitor capital on the basis of our liabilities-to-equity ratio, which is calculated as total liabilities divided by total equity. The following table sets forth our liabilities-to-equity ratios as of the dates indicated.

	As of December 31,		As of June 30,	
	2021	2022	2022	2023
	(In billions of Won, except for percentages)			
Total liabilities . . . . .	₩ 15,022	₩ 17,706	₩ 19,266	₩ 19,266
Total equity . . . . .	8,742	20,594	23,129	23,129
Liabilities-to-equity ratio . . . . .	171.8 %	86.0%	83.3%	83.3%

### ***Cash Flows***

The following table sets forth our cash flows for the periods indicated.

	For the Years Ended December 31,		For the Six Months Ended June 30,	
	2021	2022	2022	2023
	(In billions of Won)			
Net cash (used in) provided by operating activities. . .	₩ 979	₩ (580)	₩ (551)	₩ 1,296
Net cash used in investing activities. . . . .	(2,178)	(6,259)	(9,045)	(4,306)
Net cash provided by financing activities . . . . .	883	11,415	10,192	1,897
Net increase (decrease) in cash and cash equivalents .	(317)	4,575	595	(1,112)
Cash and cash equivalents at the beginning of the period . . . . .	1,493	1,283	1,283	5,938
Effects of exchange rate changes on cash and cash equivalents . . . . .	106	80	105	34
Cash and cash equivalents at the end of the period. . .	<u>₩ 1,283</u>	<u>₩ 5,938</u>	<u>₩ 1,983</u>	<u>₩ 4,860</u>

### ***Cash Flows from Operating Activities***

We recognized net cash used in operating activities of Won 551 billion in the six months ended June 30, 2022 compared to net cash provided by operating activities of Won 1,296 billion in the six months ended June 30, 2023. Such change was primarily attributable to the significant increase in profit before income tax as well as a decrease in inventories of Won 102 billion in the six months ended June 30, 2023 compared to an increase in inventories in the six months ended June 30, 2022, which were offset in part by a smaller increase in our trade payables in the six months ended June 30, 2023 compared to the six months ended June 30, 2022. The large increase in inventories of Won 2,323 billion in the six months ended June 30, 2022 was the result of inventory stocking in anticipation of stronger market demand for our products.

We recognized net cash provided by operating activities of Won 979 billion in 2021 compared to net cash used in operating activities of Won 580 billion in 2022. Such change was primarily attributable to a larger increase in inventories in 2022 compared to 2021 and an increase in trade receivables in 2022 compared to a decrease in 2021. Such changes were offset in part by an increase in our trade payables in 2022 compared to a decrease in 2021.

### ***Cash Flows from Investing Activities***

Our net cash used in investing activities decreased from Won 9,045 billion in the six months ended June 30, 2022 to Won 4,306 billion in the six months ended June 30, 2023. Such decrease was primarily attributable to a significant decrease in our cash outflow for increase in other receivables from Won 6,228 billion in the six months ended June 30, 2022 to Won 123 billion in the six months ended June 30, 2023, which was mainly attributable to a significant increase in time deposits (which are recorded as other receivables) in the six months ended June 30, 2022 due to the proceeds of the initial public offering of our shares in January 2022, compared to no such increase in the six months ended June 30, 2023. Such decrease was partially offset by an increase in our cash outflow for acquisition of property, plant and equipment from Won 2,813 billion in the six months ended June 30, 2022 to Won 4,225 billion in the six months ended June 30, 2023, which mainly reflected our expansion of battery production facilities in Poland, the United States, Canada and China.

Our net cash used in investing activities increased from Won 2,178 billion in 2021 to Won 6,259 billion in 2022. Such increase was primarily attributable to an increase in our cash outflow for acquisition of property, plant and equipment from Won 3,463 billion in 2021 to Won 6,210 billion in 2022, which mainly reflected our expansion of battery production facilities in Poland, the United States, Canada and China.

### ***Cash Flows from Financing Activities***

Our net cash provided by financing activities decreased significantly from Won 10,192 billion in the six months ended June 30, 2022 to Won 1,897 billion in the six months ended June 30, 2023. Such decrease was primarily attributable to a capital increase of Won 10,096 billion in the six months ended June 30, 2022 from the initial public offering of our common shares in January 2022, compared to no such increase in the six months ended June 30, 2023.

Our net cash provided by financing activities increased significantly from Won 883 billion in 2021 to Won 11,415 billion in 2022. Such increase was primarily attributable to the capital increase from the initial public offering of our common shares in January 2022.

### ***Borrowings and Debentures***

As of June 30, 2023, we had long-term borrowings, net of current portion, of Won 4,048 billion, all of which consisted of foreign currency-denominated borrowings.

As of June 30, 2023, we had outstanding debentures, net of current portion but before deducting present value discounts, of Won 2,513 billion, which consisted of Won-denominated debentures of Won 1,200 billion and foreign currency-denominated debentures of Won 1,313 billion.

As of June 30, 2023, we had short-term borrowings of Won 1,673 billion. In addition, Won 982 billion of long-term borrowings were scheduled to become due on or prior to June 30, 2024.

The maturities of our financial liabilities, that were outstanding as of June 30, 2023 are as follows. See Note 3.1(3) of the notes to the Interim Financial Statements included elsewhere in this offering circular.

	<b>Maturity</b>			
	<b>Less than 1 year</b>	<b>1 year to 2 years</b>	<b>2 years to 5 years</b>	<b>More than 5 years</b>
	<b>(In billions of Won)</b>			
Non-derivative instruments . . . . .				
Borrowings (excluding lease liabilities) . . . . .	₩ 2,966	₩ 1,938	₩ 3,919	₩ 1,429
Lease liabilities . . . . .	53	45	42	–
Trade and other payables . . . . .	6,944	61	17	1
<b>Subtotal</b> . . . . .	<b>₩ 9,962</b>	<b>₩ 2,043</b>	<b>₩ 3,978</b>	<b>₩ 1,429</b>
Derivative instruments				
Gross settlement currency Forwards				
(Inflows) . . . . .	₩ –	₩ (656)	₩ –	₩ (656)
Outflows . . . . .	–	568	–	551
<b>Subtotal</b> . . . . .	<b>–</b>	<b>(89)</b>	<b>–</b>	<b>(105)</b>
<b>Total</b> . . . . .	<b>₩ 9,962</b>	<b>₩ 1,955</b>	<b>₩ 3,978</b>	<b>₩ 1,324</b>

We believe that we have various alternatives available to us to satisfy our financing requirements, including short-term and long-term borrowing facilities and issuance of debentures. Our ability to rely on these sources, however, could be affected by several factors, including our results of operations and financial position, general economic conditions, the liquidity of the financial markets and institutional lenders and the Government’s policies regarding corporate borrowings. These factors can affect our ability to borrow and gain access to domestic and foreign capital markets or restrict the use of proceeds of any financing, and can require us to incur indebtedness from other sources that entail higher interest rates or shorter maturities. Any such requirement could increase our refinancing needs.

### ***Capital Expenditures***

We have made, and plan to continue to make, substantial capital expenditures required for our business. Our total capital expenditures, consisting of cash used in acquisition of property, plant and equipment, amounted to Won 3,463 billion in 2021, Won 6,210 billion in 2022 and Won 4,225 billion in the six months ended June 30, 2023. We anticipate that our capital expenditures in the remainder of 2023 and 2024 will be used principally for the expansion of automotive battery production facilities in Poland, the United States, Canada and China.

### **Quantitative and Qualitative Disclosures about Market Risk**

Market risk is the risk of loss related to adverse changes in market rates and prices, such as foreign exchange rates and interest rates. We are exposed to various market risks in our ordinary course business transactions. Accordingly, we seek to actively monitor and manage market risks in order to minimize their potential adverse effect on our financial performance. Risk management activities, such as identifying, evaluating and managing risks at the company level, are performed by our finance department.

### ***Foreign Exchange Risk***

We operate internationally and are exposed to exchange rate risk arising from various currency exposures, primarily with respect to the U.S. dollar and the Euro. Our exposure to exchange rate risk relates primarily to commercial transactions (when sales or purchases are made in currencies other than functional currencies) and assets and liabilities denominated in currencies other than the Won.

In order to minimize foreign exchange risk arising from operating activities, our management’s policies require us and our subsidiaries to manage our foreign exchange risk against our respective functional currencies. We manage our maximum loss for currency risk exposures within acceptable range by utilizing currency risk management models and hiring employees who are exclusively responsible for currency risk management. For example, we strive to naturally offset foreign exchange

risk by matching our foreign currency receivables with foreign currency payables. We have investments in foreign operations, whose net assets are exposed to foreign currency translation risk, and we manage such currency exposure primarily through borrowings denominated in the relevant foreign currencies. From time to time, we also use derivative instruments to partially hedge our foreign exchange risk. In the past, we have selectively entered into currency forward contracts to partially hedge the risks from changes in foreign exchange rates. See Note 3.1 of the notes to the 2022/2021 Financial Statements and the notes to the Interim Financial Statements included elsewhere in this offering circular.

The estimated impact on our profit before income tax for the periods indicated, from our holdings of monetary assets and liabilities denominated in foreign currencies as of the end of such respective periods, of a 10% change in Won to foreign currency exchange rates, assuming that all other variables remain constant and ignoring any impact on forecasted sales and purchases, is as follows.

	For the Year Ended December 31,				For the Six Months Ended June 30,			
	2021		2022		2022		2023	
	10% Increase	10% Decrease	10% Increase	10% Decrease	10% Increase	10% Decrease	10% Increase	10% Decrease
	(In billions of Won)							
USD . . . . .	₩ (11)	₩ 11	₩ (83)	₩ 83	₩ (164)	₩ 164	₩ 29	₩ (29)
EUR . . . . .	(447)	447	(444)	444	(473)	473	(400)	400
JPY . . . . .	(8)	8	(9)	9	(10)	10	(10)	10
CNY, etc. . . . .	34	(34)	18	(18)	12	(12)	26	(26)

### ***Interest Rate Risk***

Interest rate risk is defined as the risk that the interest income or expense arising from deposits and borrowings will fluctuate because of changes in future market interest rates. We are exposed to interest rate risk arising principally through borrowings and deposits that bear floating interest rates. The objective of interest rate risk management is to minimize financial losses and uncertainties associated with interest rate fluctuations, and we strive to manage our interest rate risk through various policies, such as internal cash sharing to minimize external borrowings, avoiding high rate borrowings, reforming capital structure, managing an appropriate ratio of fixed rate borrowings and floating rate borrowings, continuous monitoring of changes in market interest rates and balancing floating rate short-term borrowings with floating rate deposits. See Note 3.1 of the notes to the 2022/2021 Financial Statements and the notes to the Interim Financial Statements included elsewhere in this offering circular.

If interest rates on our floating rate borrowings and deposits had been 1% point (100 basis points) higher or lower with all other variables held constant, the estimated impact on our profit after income tax for the periods indicated would have been as follows.

	For the Year Ended		For the Six Months Ended	
	December 31,		June 30,	
	2021	2022	2022	2023
	(In billions of Won)			
1%p Increase . . . . .	₩ (37)	₩ (40)	₩ (40)	₩ (43)
1%p Decrease . . . . .	37	40	40	43

## BUSINESS

### Overview

We are one of the largest producers of rechargeable lithium-ion batteries in the world in terms of production capacity as of December 31, 2022 according to BloombergNEF. We offer a wide array of battery products for use in EVs, mobility and IT devices and energy storage systems. Our business comprises all stages of product research and development, manufacturing and sales. Since starting commercial production of lithium-ion batteries in 1999 for the first time in Korea, we have been the pioneer in the global rechargeable battery market with expanding facilities and networks in major hubs across the world. We operated as the energy solution business division of LG Chem until we were split-off into a wholly-owned subsidiary of LG Chem in December 2020. In January 2022, we issued and sold 34,000,000 shares of our common stock, and LG Chem sold 8,500,000 shares of our common stock, through an initial public offering. Following the offering, LG Chem held 81.8% of our total shares.

Our core product lines are as follows:

- **Advanced Automotive Battery.** We develop and manufacture high-performance rechargeable lithium-ion batteries that power various EVs. These include batteries used in EVs, plug-in hybrid vehicles, hybrid EVs and micro hybrid vehicles.
- **Mobility and IT Battery.** We produce batteries of varying shapes and sizes for use in mobility devices, as well as smartphones, laptops, power tools and other electric devices.
- **Energy Storage System.** Our ESS batteries are used in generators, power grids, commercial and industrial facilities, as well as households, allowing for storage and a stable stream of power supply.

We design, manufacture and sell advanced automotive batteries suited to power various sizes and types of EVs to major automobile OEMs. Our customers for automotive batteries include many of the leading global EV OEMs. In addition to automotive batteries, we also produce rechargeable batteries for use in mobile electronic devices, ranging from smartphones and laptops to power tools and electric bikes. Our energy solution capabilities extend also to ESS batteries. ESS batteries enable storage of electric energy at source for consumption at a later time. Our diversified ESS battery product portfolio addresses the demands of various customers, including power plants, solar and wind power farms, factories, commercial and industrial facilities and households.

We currently operate lithium-ion battery manufacturing facilities in Korea, the United States, China and Poland with a total annual production capacity of approximately 200 GWh as of December 31, 2022. In order to respond to increasing global demand for automotive batteries, as well as achieve additional economies of scale, we plan to expand our production facilities in each of our key markets, including in North America, China and Europe, as well as expand our presence in other countries. In the U.S., our joint venture with GM, Ultium Cells LLC, built a new automotive battery manufacturing facility in Ohio, which started mass production in the fourth quarter of 2022. Ultium Cells LLC also plans to build its second automotive battery manufacturing facility in Tennessee, which is expected to be completed in 2024. In January 2022, Ultium Cells LLC announced its plans to invest an additional US\$2.6 billion to build its third battery manufacturing facility in Michigan, U.S., which is scheduled to begin mass production in 2024.

We also plan to expand our stand-alone manufacturing facility in Michigan and have recently formed a joint venture with Stellantis N.V. to produce battery cells and modules in Ontario, Canada, which is scheduled to begin mass production in 2025. In July 2023, the federal and Ontario state governments of Canada announced that they would jointly be providing production incentives of up to CAD 15 billion to such joint venture. In January 2023, we and Honda Motor Co. established the joint

venture L-H Battery Company, Inc., to build another manufacturing facility in Ohio, which is expected to be completed in 2025. We have also announced our plans to build a battery production facility in Arizona for both cylindrical batteries for EVs, which is scheduled to become operational in the first half of 2025, and LFP pouch batteries for ESS applications, which is scheduled to become operational in early 2026. Furthermore, we formed a joint venture with Hyundai Motor Company in May 2023 to construct a battery cell manufacturing facility in Georgia, U.S. In China, we plan to expand the existing Nanjing plant and construct additional production lines targeting global OEM plants and local EV startups as potential customers, and in Europe, we plan to expand our stand-alone production capacities for pouch-type EV batteries.

We were incorporated on December 1, 2020 when the energy solution business division of LG Chem was split off. Our consolidated revenue amounted to Won 17,852 billion in 2021, Won 25,599 billion in 2022, Won 9,413 billion in the six months ended June 30, 2022 and Won 17,521 billion in the six months ended June 30, 2023. We recorded profit of Won 930 billion in 2021, Won 780 billion in 2022, Won 317 billion in the six months ended June 30, 2022 and Won 1,027 billion in the six months ended June 30, 2023. We had total assets of Won 42,395 billion and total equity of Won 23,129 billion as of June 30, 2023, compared to total assets of Won 38,299 billion and total equity of Won 20,594 billion as of December 31, 2022.

### **Commitment to ESG Initiatives**

We are committed to advancing Environmental, Social and Governance (“ESG”) initiatives under our “CHARGE” vision declared in July 2021. The core achievements and tasks of each critical area are as follows:

#### ***C: Climate Action and Circular Economy***

Our climate strategy is essential to establishing a sustainable battery ecosystem. We strive to improve our energy efficiency, accelerate our transition to renewable energy and engage our suppliers to combat climate change as part of our continued efforts to minimize greenhouse gas emissions generated from our business activities. By setting interim targets and implementation roadmaps, we aim to achieve carbon neutrality in our entire supply chain by 2050. In April 2021, we became the first lithium-ion battery manufacturer to join both the Renewable Electricity 100% (“RE100”) and Electric Vehicles 100% (“EV100”) collaborative environmental initiatives. We are currently committed to sourcing all electricity used for our global operations from renewable energy by 2030, which is 20 years ahead of global campaign targets. The RE100 Annual Disclosure Report 2022, which was published in January 2023 by the Climate Group and the Carbon Disclosure Project (international non-profit organizations that help companies address climate change), indicates that we have achieved the highest level of renewable energy transition among Korean firms participating in the RE100 initiatives.

We are building a closed-loop system in each of our manufacturing sites where non-reusable batteries and scraps generated during the production stage are recycled and the extracted materials are then reinjected into the production stage. We are also collaborating with regional partners to establish an end-of-life battery collection system in order to provide the best solutions possible for the needs of our customers and to prepare for compliance with various regulatory requirements.

#### ***H: Human Value Management***

We respect the rights of our employees and all relevant stakeholders, and strive to protect human rights when carrying out our business activities. Based on the principle that our employees are our first and foremost customers, we foster and advance a culture that embraces diversity, equity and inclusion. Our company-wide policies, Global Human Rights and Labor Policy and Diversity, Equity and Inclusion Policy, provide a set of principles that apply to all of our domestic and overseas business activities. Moreover, we have established systematic procedures to regularly monitor and mitigate the risk of potential human rights or labor rights violations from its operations and supply chains.

### ***A: Advanced Environment, Health and Safety (“EH&S”)***

As part of our commitment to minimize adverse environmental and social impacts of our business activities and deliver sustainable values through our products and services, we established an environmental management system based on the International Organization for Standardization (“ISO”) 14001, and occupational health and safety management systems based on ISO 45001. We operate a product stewardship process to continually monitor and manage our compliance with evolving product and environmental regulations, including the Chemical Assurance and Regulation Management system (CHARMs 2.0), which encompasses the entire process from the purchase of raw materials to the sales of final products. In addition, we conduct a comprehensive inspection of our global business sites for potential risks of environment-related accidents on a regular basis and have been implementing robust initiatives to prevent accidents, raise employee and supplier awareness and improve the safety and health of the workplace.

### ***R: Responsible & Impactful Business***

Responsible supply chain management is crucial to maintain sustainable business management. The rapid growth of the battery market has brought various issues related to the supply of raw materials to the forefront, and accordingly, the ethical and transparent management of supply chains has now become an essential business strategy.

We operate a supply chain management framework which comprises the Responsible Sourcing Policy, Code of Conduct for Suppliers and appropriate due diligence processes. We directly engage with our Tier-1 suppliers through regular ESG evaluations and require each of our suppliers to manage our own supply chains in accordance with our Code of Conduct for Suppliers. In doing so, we aim to provide sustainable values to all value chains and enforce greater transparency and traceability across our supply chains well beyond our Tier-1 suppliers.

Furthermore, we are committed to fulfilling our social responsibility by engaging with and supporting local communities at our global business sites as well as communities relevant to our battery supply chains. Based on a company-wide global social impact strategy known as the corporate social responsibility (“CSR”) strategy, we intend to build on our existing CSR activities as well as develop new activities that focus on underrepresented and marginalized groups of the communities.

### ***G: Good Governance***

We seek to ensure that our governance is transparent, accountable and sustainable. We intend to promote diversity within our board of directors and leverage the expertise of the ESG Committee and the Advisory Group of Experts to inform our decision-making processes. We also strive to advance our compliance management system to facilitate the compliance of all our global business sites and suppliers. In November 2021, we became the first company in the battery industry to acquire the ISO 37301 certification on a compliance management system, and we continue to improve our compliance management through corresponding surveillance audits. In addition, we aim to strengthen ethical management by conducting regular audits at our global business sites and providing ethical code training for our employees and suppliers.

### ***E: ESG Disclosure & Communication***

We seek to systemize our data collection process and implement a framework to measure ESG performance. In addition to our annual ESG reporting activities, we seek to proactively communicate the latest available ESG information with various stakeholders, including customers, suppliers, institutional investors, ESG rating agencies and non-governmental organizations.

Furthermore, the battery value chain is complex, and there are still many uncertainties regarding the opportunities, challenges and industrial norms surrounding ESG issues. We seek to set the global standard of ESG performance within the battery manufacturing industry by joining global initiatives to actively communicate and cooperate with various companies, organizations and stakeholders who share the same purpose and goal.

## **History and Corporate Information**

We began our research and development activities in lithium-ion batteries as a new business division of LG Chem in 1996, starting commercial production of lithium-ion batteries for consumer applications in 1999. We started the development of lithium-ion batteries for automotives in 2000 and began the commercial production and sale of automotive batteries in 2009. We started the commercial production of ESS batteries in 2010 and signed a long-term supply agreement of 1 GWh with AES Corporation in 2015. We started the commercial production and sale of lithium-ion batteries for long-range EVs in 2016, and completed the construction of our manufacturing facilities in Poland in 2017.

On December 1, 2020, in order to more effectively respond to the increasing demand for rechargeable lithium-ion batteries in the automotive and IT industries, we were established as a wholly-owned subsidiary of LG Chem through the Split-off. In January 2022, we issued and sold 34,000,000 shares of our common stock, and LG Chem sold 8,500,000 shares of our common stock, through an initial public offering. Following the offering, LG Chem held 81.8% of our total shares.

We are a member of the LG Group, which was the fourth largest business group in Korea in terms of combined assets as of December 31, 2022, according to the Korea Fair Trade Commission. Our registered office is at Parc One Tower 1, 108 Yeoui-daero, Yeongdeungpo-gu, Seoul 07335, Korea.

## **Our Products and Applications**

We engage in the production of rechargeable lithium-ion batteries used in EVs, mobile devices, such as smartphones and laptop computers, as well as ESS battery systems. Lithium-ion batteries are rechargeable and have one of the highest energy densities among the battery technologies currently available. They are widely used in EVs, electronic devices and energy storage systems.

### ***Automotive Batteries***

Our automotive batteries are used in a broad range of environment-friendly vehicles, including EVs and hybrid vehicles. We are among the world's leading producers of automotive batteries. The automotive battery market has been expanding at a rapid pace due to the strengthening of fuel efficiency standards in many countries, enhanced governmental subsidies and economic incentives supporting the purchase and use of EVs, major advances in EV technology and the increasing cost-competitiveness of EVs compared to traditional internal combustion engine vehicles.

Our automotive battery products are produced in the form of battery cells, battery modules and battery packs. The battery cell is the core and basic structural unit of an automotive battery product, and a battery module is formed by compiling a certain number of these battery cells. Battery modules are further assembled into a battery pack, along with other control and protection systems such as battery management systems and cooling systems, before it is installed in EVs. We sell all three forms of automotive battery products to our customers based on their needs.

Lithium-ion battery products used in EVs generally take one of the following three major types based on the forms of battery cells: cylindrical, prismatic and pouch types. Each form type of battery cells offers different advantages and disadvantages, including those relating to mechanical stability, heat control, optimal use of space and weight, and each automobile OEM generally has a preference for a certain form type depending on its design of battery packs and vehicles. Our automotive battery products primarily consist of cylindrical and pouch cell types.

- Cylindrical cells consist of sheet-like anodes, separators, and cathodes that are sandwiched, rolled up, and packed into a cylinder-shaped can. Some of the advantages of cylindrical cells include mechanical stability, easier heat control and low manufacturing costs compared to other form types. Its primary disadvantage is the difficulty of fully utilizing available space.
- Pouch cells do not have a rigid enclosure but rather utilize a sealed flexible foil as their cell container. Due to their light packaging, pouch cells are lighter in weight and their shape can be tailored to fully utilize the available space. Some of the disadvantages include more complex development and manufacturing processes than other form types, as well as the swelling of the battery cells with gas.
- Prismatic cells consist of large sheets of anodes, separators, and cathodes that are sandwiched, rolled up, and compressed into a metallic or plastic housing in cubic form. Their box-like shape enables optimal use of the available space when combining them into battery modules and packs. However, prismatic cells are subject to higher risk of damage near container corners as well as more challenging heat control. We currently do not produce prismatic cells.

The competitiveness of our automotive battery products stems from our utilization of advanced technologies to produce high-quality battery products that meet our customer's specific key technical requirements, including energy density, multiple charging cycles, fast charging and long lifespan. We have achieved a high degree of flexibility in customizing our battery cells, modules and packs, and are able to efficiently produce modules tailored to various pack structures. Our battery packs can also be customized to meet the design requirements of our OEM customers by maximizing space efficiency through reinforced structural rigidity without compromising safety.

#### ***Mobility and IT Batteries***

The mobility and IT batteries which we produce are primarily used in mobility devices, such as electric bicycles, mobile electronic devices such as smartphones and laptops and power tools and wearable devices. We produce a wide range of products based on cylindrical and pouch type cells. We also have the ability to produce such batteries in varying shapes and sizes based on our patented "stack and folding" structure, which allows us to provide our customers with a wide range of design flexibility.

#### ***ESS Batteries***

The ESS battery products that we produce are used to store energy at various facilities, including power generators, electrical grids, commercial and industrial facilities and households.

ESS batteries store electric energy at source for consumption at a later time, improving energy efficiency, sustainability and the stability of power supply systems. For example, an ESS battery can store surplus energy generated from photovoltaic panels to be used at a later time as an alternative to the electrical grid. ESS batteries offer users flexibility in the way that they generate and use energy and are considered to be an important component for harnessing renewable energy sources.

## Customers, Sales and Distribution

Our main customers include major automobile OEMs for our automotive battery products, global electronic manufacturers for our mobile and IT batteries and utility companies and system integrators for our ESS batteries. Our domestic sales are predominantly denominated in Won, while our overseas sales are generally denominated in U.S. dollars. The following table sets forth our sales by geographical location for the periods indicated.

	For the year ended December 31,		For the six months ended June 30,	
	2021	2022	2022	2023
	(In billions of Won)			
Korea <sup>(1)</sup> . . . . .	₩ 2,235	₩ 1,350	₩ 778	₩ 1,427
China . . . . .	2,911	6,067	2,433	3,328
Asia (excluding Korea and China) and Oceania . . . . .	1,110	1,451	649	701
Americas . . . . .	2,828	7,075	1,537	4,668
Europe . . . . .	8,768	9,654	4,015	7,397
Africa . . . . .	–	0	0	–
<b>Total</b> . . . . .	<b>₩ 17,852</b>	<b>₩ 25,599</b>	<b>₩ 9,413</b>	<b>₩ 17,521</b>

(1) Including exports made through local letters of credit.

Our total order backlog from our customers amounted to approximately Won 260 trillion, Won 385 trillion and Won 440 trillion as of December 31, 2021, December 31, 2022 and June 30, 2023 respectively.

### *Automotive Batteries*

Our major customers for automotive batteries are global automotive OEMs, including Volkswagen, GM, Ford, Renault and Hyundai Motor Company. Our manufacturing arrangements with these customers, which are typically long-term, require a complicated and time-consuming research and development process for us to tailor our products to, and meet the technological requirements of, our customers. Once we and our customers agree on the manufacturing and standard operating procedures, we supply batteries to them for a specific EV model during the entire lifespan of the model, which typically ranges between five and fifteen years.

Our customers look for quality, scale and timely delivery, and we believe that our close relationships with our major customers enable us to better anticipate market trends and evolving customer needs. In particular, strict standards imposed by automotive OEMs for the production of automotive batteries make it challenging and time-consuming to become a qualified supplier. As a core component of EVs, the production and development of automotive batteries have to align with the requirements of the vehicle's specifications as a whole as well as the specific requirements of each model. Per industry practice, only products that have passed the internal inspection and testing of the vehicle manufacturer can be assembled into the corresponding vehicle model. Accordingly, a substantial period of time is required from the initial development of the automotive battery model to the sale and marketing of the battery products, which involves a comprehensive process ranging from product design, trial production, sample testing, joint debugging and joint testing, national standard certification, product finalization, product review by the regulatory authorities, and finally, introduction of the product into the market. Generally, once a battery supplier becomes a qualified supplier, an automobile OEM strives to establish a long-term and stable supply relationship with its automotive battery supplier and will not easily change its supplier.

We typically enter into supply arrangements that do not establish fixed pricing and volume commitments for an extended period of time. However, our key customers provide us with advanced rolling forecasts of their product requirements, and they issue purchase orders based on periodic negotiation of purchase price and volume. Our existing arrangements with our customers do not restrict

us from entering into similar arrangements with other customers. We typically issue an invoice after the delivery of our products to customers, and payments are received within 25 to 150 days of the invoice date depending on the payment terms agreed with the customer.

### ***Mobility and IT Batteries***

Our major customers for mobility and IT batteries are (i) global EV manufacturers, including Tesla, Lucid Motors, Proterra and Bosch, (ii) power tool manufacturers, including Stanley Black & Decker and (iii) global manufacturers of IT products such as smartphones, laptops and tablets, including Apple, LG Electronics, Acer, Lenovo Group and Hewlett-Packard. We typically enter into long-term supply agreements with our major customers to develop and supply batteries for a particular IT product model throughout its lifespan, which ranges from several months to a few years. Under such arrangements, we typically supply our battery products in accordance with purchase orders for specific EV and IT product models. We typically issue an invoice after the delivery of our products to customers, and payments are generally received within 30 to 150 days of the invoice date depending on the payment terms agreed with the customer.

### ***ESS Batteries***

Major customers of our ESS batteries include power generators, utility companies, system integrators and ESS developers. ESS customers tend to focus on product safety and reliability and prefer to establish long-term and stable supply relationships with battery suppliers.

ESS batteries are typically provided throughout the lifecycle of power projects. The duration of supply agreements varies depending on the scale of the projects, ranging from several months to a few years. We typically enter into master supply agreements with our major customers and supply our products pursuant to purchase orders for specific projects. We typically issue an invoice after the delivery of our products to customers, and payments are received within 30 to 180 days of the invoice date depending on the payment terms agreed with the customer.

### **Raw Materials**

The main raw materials used in our production of lithium-ion batteries include cathode materials, anode materials, separators and electrolytes, as well as copper foil for small batteries, among which cathode materials and separators represent a substantial portion of our overall raw materials cost. We also purchase certain components for our ESS products, such as battery management systems, electrics, cooling and injection parts, from third-party suppliers. To minimize any potential interruption to our operations due to the lack of supply of principal raw materials, we purchase each of these materials and components from multiple suppliers located in various regions worldwide. Additionally, we have made, and continue to make, strategic arrangements, including equity investments and long-term supply agreements, with top suppliers of raw materials. We typically enter into supply agreements with our key material suppliers for multi-year terms, while each purchase is made through a purchase order at a price that is determined based on the benchmark price of the relevant raw material.

In August 2022, the United States enacted the IRA, which, among others, provides tax benefits to EVs that are assembled within North America and utilize batteries that (i) have a certain percentage of their critical minerals extracted or processed in the United States or in a country with a free-trade agreement with the United States, (ii) are manufactured or assembled in North America and (iii) do not contain components manufactured or assembled by a foreign country of concern, including China. Partly as a response to the enactment of such act, we have expanded our supply chain to accommodate the IRA's requirements by entering into mineral supply agreements with companies in the United States, Australia and Canada, among others. For example, in June 2023, we entered into a joint research and development agreement with Novonix Limited, a leading battery materials and technology company in the United States, for the joint research and development of artificial graphite anode materials for lithium-ion batteries.

We believe that our agreements with raw material suppliers contain commercial terms and conditions that are customary for the industry. Historically, we have not experienced any significant difficulties in obtaining raw materials to satisfy our production requirements.

We strive to maintain a socially responsible supply chain. We have instituted and maintained a supplier code of conduct since 2016 in order to regulate various aspects of our suppliers' supply chain management, including human rights, labor rights, ethics, environmental sustainability and responsible procurement of minerals. This code governs our selection, monitoring, assessment and management of the supplier network. We plan to reinforce monitoring of and support for our suppliers' ESG practices and ensure that at least 90% of our supplier network is comprised of partners who are responsive to such initiatives.

## **Production**

### ***Battery Cells***

Under strictly controlled dust and humidity conditions in our manufacturing facilities, our production department inspects, mixes and stirs the raw materials in appropriate proportions for the production of positive and negative electrodes. After the cathode of a battery is coated on aluminum foil and the anode of a battery is coated in copper foil, the cathode and the anode are separated by a separator, wound up on a coil core and tested with heat, pressure, resistance and X-rays. The processed coil core is then heated up in a vacuum and finally filled and sealed in the metal shell. After a series of testing, the battery cells are classified and inspected before delivery to customers.

### ***Battery Modules***

The batteries are cleaned and paired with their respective side plates and other components required by each modular or electrical box, then assembled and welded together. Following this process, the side plates and the bottom plate of the batteries are welded and assembled. After passing the internal resistance test on the insulator inside, the modular or electrical boxes are covered by top plates and delivered to the warehouse.

During the design process, we adopt topology and topography optimization. We conduct size optimization, thermal analysis and heat loss control at an early stage of the design process of the modular or electrical box. Additionally, we perform impact and pressure tests during the design process to ensure the safety, reliability and durability of the final products.

### ***Battery Packs***

The contemplated modular or electrical boxes are then assembled with connectors and a cooling system, and installed into their respective shells with high and low voltage wires. After passing the tests on the cooling system and airtightness on the battery packs, the battery packs are delivered to the warehouse.

### ***Quality Control and Product Safety***

We implement strict product safety and quality control measures to ensure the reliability of our batteries from the beginning of our product development cycle.

Our quality control measures and protocols are implemented across all stages of production to ensure that our products are produced according to their initial design. The quality control procedure involves joint efforts of many of our teams, including the following: (i) the product center circulates the control parameters on product specifications, (ii) the engineering center controls and monitors the control parameters, (iii) the factory and construction department sets up a series of environmental parameters during the production process and monitors their compliance; (iv) the quality inspection

center specifies the relevant quality control standards and inspects the technological parameter during the production process and (v) the operation center provides training to employees regarding quality control.

### Production Facilities

We have established a network of production facilities in strategic locations around the world in order to better serve our major geographic markets and target customers. We currently operate lithium-ion battery manufacturing facilities in Korea, the United States, China and Poland with a total annual production capacity of approximately 200 GWh as of December 31, 2022.

The following table sets forth information regarding our production facilities as of December 31, 2022.

<u>Production Facility</u>	<u>Primary Products</u>	<u>Year Established</u>
Ochang, Korea . . . . .	Mobile batteries, automotive batteries, ESS batteries	2011
Michigan, United States . . . . .	Automotive batteries, battery packs	2010
Ohio, United States . . . . .	Automotive batteries, battery packs	2020
Nanjing, China . . . . .	Automotive batteries	Factory 1: 2014
	Mobile batteries	Factory 2: 2018
		2003
Wroclaw, Poland . . . . .	Automotive batteries	2016

We plan to continue to invest in our production facilities and upgrade our equipment and manufacturing processes in order to increase our production capacity, achieve additional economies of scale and support production of new products. When making capital expenditure plans, we continually analyze the allocation of our resources around the world, taking into consideration factors such as anticipated market demand, location of our key customers, relative currency values and the cost of goods and labor in various jurisdictions.

The following table sets forth the details of our major capital expenditure projects in progress as of June 30, 2023.

<u>Project</u>	<u>Amount Expended as of June 30, 2023</u>	<u>Estimated Additional Cost</u>	<u>Additional Annual Production Capacity</u>	<u>Expected Year of Completion</u>
	(in billions of Won)			
<b>Nanjing, China</b>				
Expansion of small battery facilities . . . . .	₩ 511	₩ 1,016	13 GWh	2023
<b>Michigan, United States</b>				
Expansion of automotive battery production Facilities . . . . .	645	3,868	45 GWh	2026
<b>Ohio, United States</b>				
Expansion of automotive battery production Facilities . . . . .	2,853	1,347	31 GWh	2024
<b>Tennessee, United States</b>				
Expansion of automotive battery production Facilities . . . . .	1,885	2,575	45 GWh	2025
<b>Arizona, United States</b>				
Expansion of small battery production facilities . . .	227	4,653	30 GWh	2025

In addition to the above, we are also constructing, or planning to construct, additional production facilities through multiple joint ventures. See “– Joint Ventures.”

Our total capital expenditures, consisting of cash used in acquisition of property, plant and equipment, amounted to Won 3,463 billion in 2021, Won 6,210 billion in 2022, Won 2,813 billion in the six months ended June 30, 2022 and Won 4,225 billion in the six months ended June 30, 2023, primarily for the expansion of automotive battery production facilities in Poland, the United States, Canada and China.

## Research and Development

We compete in highly competitive global markets characterized by evolving industry standards, continual technological development and product innovation. We believe that continued and timely development of new products and enhancements to existing products and manufacturing processes, as well as new technologies, are critical to maintaining our competitive position in the markets in which we operate. Accordingly, we have made, and will continue to make, significant investments in research and development activities. Our total research and development expenses, including our investments in certain funds related to research and development, amounted to Won 654 billion in 2021, Won 876 billion in 2022, Won 378 billion in the six months ended June 30, 2022 and Won 471 billion in the six months ended June 30, 2023.

Our research and development activities are carried out domestically and overseas, both in-house and via outsourcing. As of June 30, 2023, our domestic research and development activities were supported by 3,745 employees working at our R&D center, development centers for each product category and other R&D facilities, while our overseas research and development activities were supported by 316 employees through collaboration with our R&D partner networks in the United States, Europe, China and Japan. Our battery R&D center focuses on the research for new battery technologies and battery materials, including materials for high performance cathodes and anodes. Our development centers for each product category focus on the development and improvement of products and production technologies for a particular product category. For example, our automotive battery development center concentrates on developing high energy density EV battery packs.

We have successfully developed the following new products and technologies:

- free-form battery that allows variations in its form to fit into different shapes of devices it powers. It applies lamination and staking technology in lieu of the conventional winding method, which helps maximize the internal space of the device and allows customization of battery forms to meet customers' manufacturing requirements;
- high-capacity nickel-rich cathodes;
- high-capacity fast charging anodes;
- high-performance electrolytes with enhanced safety, heat resistance and fast charging capacity;
- fire-retardant and heat-resistant separators;
- manufacturing and assembly processes of electrodes;
- high-capacity and high-energy density automotive battery cells and packs; and
- low-cost, long lifespan and high-efficiency ESS batteries for grid, industrial and household uses.

## Intellectual Property

We depend on our proprietary technologies and production know-how to maintain our competitive position in the markets in which we operate, and we produce intellectual property through our extensive research and development activities. Our general policy is to apply for patents on an ongoing basis, in Korea and other appropriate jurisdictions, on patentable developments that are considered to have commercial significance. Our portfolio of patents covers our proprietary technologies used in products as well as many aspects of our product design and manufacturing processes. We may also purchase patents from other companies if we determine such patents to be necessary to our business.

We seek to protect our intellectual property and proprietary rights primarily through intellectual property laws, relying on a combination of patent, trademark, trade secret and other intellectual property laws in Korea, the United States and other countries. We also rely on unregistered proprietary rights, including know-how and trade secrets, related to our operations. Our know-how and trade secrets may not be patentable, but they are also valuable in that they enhance our ability to provide high-quality products to our customers.

As of June 30, 2023, we owned 8,795 patents in Korea and 19,587 patents outside Korea, as well as applications pending for 9,109 patents in Korea and 12,865 patents outside Korea. Our key patents include technologies related to the following:

- High-intensity safety-reinforced separators;
- High-energy electrode active materials with particle-size gradients; and
- Stack-folding electrode assembly.

We require our research and development employees and many of our customers to enter into confidentiality agreements prohibiting them from disclosing our proprietary information or technology. In addition, we have developed internal policies to promote the development of inventions, ideas, discoveries, improvements and copyrightable materials by our employees and to compensate those who achieve such results during their employment with us, in accordance with the Invention Promotion Act.

## **Joint Ventures**

We have engaged in joint product development activities with our key customers and continue to seek opportunities to enter into strategic joint ventures in an effort to consolidate our position as a global leader in the rechargeable lithium-ion battery market. We believe that such strategic collaborations will strengthen our ability to optimize product design and supply chains, maintain product competitiveness and access new markets, products and technologies.

In December 2019, we entered into a 50:50 joint venture with GM, Ultium Cells LLC, to jointly utilize both partners' advanced manufacturing processes, achieve economies of scale and meet demands for GM's growing production of EVs. Ultium Cells LLC built a new automotive battery manufacturing facility in Ohio, which started mass production in the fourth quarter of 2022. Ultium Cells LLC plans to build its second automotive battery manufacturing facility in Tennessee, which is expected to be completed in 2024. In January 2022, Ultium Cells LLC announced its plans to invest an additional US\$2.6 billion to build its third battery manufacturing facility in Michigan, U.S., which is scheduled to begin mass production in 2024.

In August 2021, we entered into a 50:50 joint venture with Hyundai Motor Company to produce battery cells in Indonesia to supply to Hyundai Motor Company's car manufacturing plant in Indonesia. The joint venture entity, PT. HLI Green Power (formerly HKML Battery Indonesia), plans to build a battery cell manufacturing facility with an annual production capacity of 10 GWh, representing a total investment of approximately US\$1.1 billion, which is expected to begin mass production in 2024.

In April 2022, we formed a joint venture with Stellantis N.V. to produce battery cells and modules in Ontario, Canada. The manufacturing facility is expected to have an annual production capacity of 45 GWh and begin mass production in 2025. In July 2023, the federal and Ontario state governments of Canada announced that they would jointly be providing production incentives of up to CAD 15 billion to such joint venture.

In July 2022, we entered into a joint venture agreement with Huayou Cobalt Co., Ltd. to construct a battery recycling plant in China to secure the raw materials required for the production of lithium-ion battery components. In August 2023, we established such joint venture and entered into an agreement to construct a facility in Nanjing, China for the pre-treatment of battery scraps and used batteries and a facility in Quzhou, China for the extraction of metals in post-processing.

In January 2023, we and Honda Motor Co. established the joint venture company L-H Battery Company, Inc., with us and Honda Motor Co. each holding 51% and 49% of the joint venture's shares, respectively, to construct a new battery manufacturing facility in Ohio. Such facility is expected to have an annual production capacity of 40 GWh and begin operating in 2025. We have also announced our plans to build a battery production facility in Arizona for both cylindrical batteries for EVs, which is scheduled to become operational in the first half of 2025, and LFP pouch batteries for ESS applications, which is scheduled to become operational in early 2026.

In May 2023, we entered into a 50:50 joint venture agreement with Hyundai Motor Company to construct a battery cell manufacturing facility in Georgia, the United States. Such facility is expected to have an annual production capacity of 30 GWh and begin operating in late 2025.

## **Competition**

We operate in the rechargeable lithium-ion battery market, which is highly competitive. It is characterized by strong competition among a few key producers and their aggressive capital investments, R&D expenditures and strategic transactions such as joint ventures vying for a greater market share. We primarily compete with major lithium-ion battery manufacturers in Korea, China and Japan, including Korea's Samsung SDI Co., Ltd. and SK on, China's Contemporary Amperex Technology (CATL) and BYD Co., Ltd. and Japan's Panasonic Corporation.

The most critical factors of success in the lithium-ion battery business are technological competitiveness, production capacity and competitive pricing. In addition, we compete primarily based on the following factors:

- product safety, performance, quality and reliability;
- manufacturing efficiency;
- development of new products and manufacturing processes;
- responsiveness to changes in customer needs and regulatory framework;
- distribution capacity and ability to deliver in large volumes on a timely basis;
- development and expansion of marketing and sales network; and
- stable supplies of raw materials.

Entry into the lithium-ion battery manufacturing business requires substantial capital expenditures and significant technological and manufacturing expertise. Although we believe that our existing investment, experience and technological expertise provide significant "time to market" and economies of scale advantages over any potential new entrant into this market, we may face increasing competition from emerging companies that are capable of significantly expanding the scale of their operations. In addition, some of the manufacturers of EVs have increased production of lithium-ion batteries in recent periods and have announced their plans for additional capital investment to increase battery production, which may lead to intensified competition among manufacturers of lithium-ion batteries in the future.

## Environmental Matters

We actively seek to engage in environmentally-responsible management of our operations and to protect the environment from damage resulting from our operations. Consistent with international best practices, we have implemented a management system designed to promote the safety, health and preservation of the environment in our operations. For example, we have received ISO14001 certifications for our production and R&D facilities and conduct surveillance and renewal audits every three years. We also launched a Chemical Assurance and Regulation Management System to promote the environmental friendliness of our batteries as well as to manage our compliance with the applicable regulations and environmental protection measures governing the purchase, use and disposal of battery-related chemicals.

Further, we are investing significant resources in developing a closed-loop recycling system that covers the entire social value chain from raw material production to battery disposal. We have installed EV quick-charging stations using end-of-life batteries at our production plants and research and development centers, and have constructed recycling systems to reprocess end-of-life batteries as metals for reuse in battery production. In furtherance of our recycling efforts, in February 2021, we also entered into a memorandum of understanding with the Korean Ministry of Trade, Industry and Energy, Hyundai Motor Company, Hyundai Glovis and KST Mobility to facilitate the recycling of used EV batteries. Moreover, we established a joint venture with Huayou Cobalt Co., Ltd. in August 2023 to construct battery recycling plants in China to extract nickel, cobalt and lithium from post-consumption batteries and manufacturing scraps to be reprocessed into cathode materials. We are also exploring opportunities for strategic partnerships to replicate similar recycling systems in Korea, the U.S. and Europe. Examples include the end-of-life battery recycling arrangement between Ultium Cells LLC, our joint venture with GM, and a lithium-ion battery recycling company in North America. Through this arrangement, we expect that Ultium Cells LLC will be able to recycle cobalt, nickel, lithium and other byproducts from its battery cell manufacturing process and reuse them in the production of new battery cells.

In addition, as part of our firm commitment to ESG principles, we have joined various environmental initiatives. For example, in April 2021, we became the first lithium-ion battery manufacturer to join both the RE100 and EV100 collaborative environmental initiatives. RE100 is a global corporate renewable energy initiative that was launched in 2014 by the Climate Group in partnership with the Carbon Disclosure Project, and is a collective of businesses committed to sourcing all of the electricity used for their global operations from renewable energy by 2050. Other members include Google, 3M, Microsoft, Apple, GM and many other Global Fortune 500 companies. As a Gold member of the RE100, we are committed to achieving the goals of RE100 across our global operations by 2030, which is 20 years earlier than what RE100 aims for. In 2022, we achieved a 56% conversion rate of renewable energy across our global business sites, and 61% across our global production sites. Furthermore, we are the first battery manufacturer to hold a seat on the Advisory Committee of the RE100 Project Board. As a policy advisor to devise impactful strategies for the expansion of the renewable energy market at national and local levels, we plan to focus on ensuring that the global leadership accelerates carbon reduction across the battery industry and supply chains.

Our production facilities in the U.S. and Poland are fully powered using renewable electricity, and as a Gold member of the RE100, we are targeting to achieve the same for our other global operations, including our Korean and Chinese facilities, by 2030.

EV100 was launched by the Climate Group in partnership with We Mean Business Coalition and is aimed at making EVs the “new normal” by 2030. Members of the EV100 are committed to accelerating the transition to EVs, installing charging stations for their staff and customers, achieving net-zero emissions and engaging in related campaigns to promote such transition. As a member of the EV100, we plan to transition our corporate vehicles into EVs and install charging stations at all locations for our staff by 2030. These are just a few examples demonstrating our continued efforts dedicated to the plan of achieving carbon neutrality by 2050.

Our production activities are subject to the environmental laws and regulations of the jurisdictions in which we operate. These laws and regulations empower the relevant government authorities to require environmental permits and submission of periodic reports, impose fees, clean-up or other remedial actions and continuous compliance with their standards and requirements. Some of the laws and regulations which we are subject to in Korea include the Clean Air Conservation Act, the Water Environment Conservation Act, the Soil Environment Conservation Act, the Act on the Registration and Evaluation of Chemicals, the Noise and Vibration Control Act, Wastes Control Act, Groundwater Act and Chemical Substances Control Act. In addition to the foregoing, we are also subject to the laws and regulations of jurisdictions outside of Korea in which we have production facilities.

While we believe that we are in compliance in all material respects with applicable environmental laws and regulations, the discharge of oil, gas or other pollutants into the air, soil or water may nevertheless give rise to liabilities and may require us to incur costs to remedy the damage caused by such discharges. Furthermore, any future changes to environmental laws may require us to modify or curtail our production activities or make additional capital expenditures, all of which may adversely affect our operations. See “Risk Factors – Risks Relating to Regulation – We are subject to stringent environmental regulations that could interrupt our operations or subject us to substantial compliance costs.”

### **Health and Safety**

We believe that we are in compliance with applicable health and safety laws and regulations in all material respects. Health and safety is a priority at all of our facilities. We have implemented a number of initiatives to create a safer workplace, including the establishment of an audit program to register and monitor all on-site safety activities and risks and conducting regular training programs for our employees. We have also established dedicated on-site departments at our facilities in charge of the health and safety of our employees and operate monitoring systems to facilitate timely identification of and reaction to accidents. We perform safety inspections on a regular basis of certain manufacturing processes that may pose a significant industrial hazard and implement risk management measures to minimize or eliminate the risk factors identified through such inspections. We also plan to develop new digital transformation technologies and implement safety infrastructures for remote monitoring and automatic controls by the end of 2023 across our global production sites to prevent industrial accidents. We continue to review and improve the effectiveness and appropriateness of our systems and policies through periodic reviews and certifications by external experts.

### **Insurance**

We have comprehensive insurance policies that cover different aspects of our business and properties, including property damage package insurance, liability insurance and cargo insurance as well as business interruption insurance which covers certain of the losses of profits which may result from an industrial accident. We pay premiums for our insurance policies based on international market rates. We consider our insurance coverage to be in accordance with industry standards.

### **Employees**

As of June 30, 2023, we had a total of 11,652 full-time employees and 141 contract and part-time employees (excluding employees of our subsidiaries). The following table provides a breakdown of our employees, as of the dates indicated.

<u>As of</u>	<u>Number of Full-time Employees</u>	<u>Number of Contract/Part-Time Employees</u>	<u>Total Number of Employees</u>
December 31, 2021 . . . . .	9,473	91	9,564
December 31, 2022 . . . . .	10,919	161	11,080
June 30, 2023 . . . . .	11,652	141	11,793

Like most Korean companies, we grant our employees annual increases in basic wages and pay periodic bonuses. We also provide a wide range of fringe benefits to our employees, including housing and meal subsidies, medical, death and accident insurance, periodic health examinations, educational subsidies for long-term employees' children, special subsidies for significant personal events (such as marriage, birth of children or death of family members) and use of recreational facilities.

A significant number of our employees are members of our joint labor union with LG Chem. We annually negotiate a collective bargaining agreement and a wage agreement with the labor union, which were last entered into in December 2022 for the collective bargaining agreement and March 2022 for the wage agreement. Annual wage increases are determined jointly by employee and management representatives in consideration of our performance, the rate of inflation and economic growth in Korea and other relevant factors. We have not experienced any material labor disputes in recent years and consider our current relations with our workforce to be good.

For employees based in Korea, in accordance with the National Pension Act of Korea, we and our employees each contribute an amount equal to 4.5% of such employee's standard monthly income into a personal pension account of such employee. In addition, in accordance with the Act on the Guarantee of Employees' Retirement Benefits, we have adopted retirement pension plans for our employees. Contributions under the retirement pension plans are deposited annually into a retirement pension trust, and an employee may elect to receive a monthly pension or a lump-sum amount upon retirement pursuant to either a defined benefit plan or a defined contribution plan. The defined benefit plan guarantees a certain payout at retirement, according to a fixed formula based on the employee's average salary and the number of years for which the employee has been a plan member. On a consolidated basis, we had net defined benefit liabilities and net defined benefit assets of Won 0.4 billion and Won 184 billion as of June 30, 2023, respectively. For further information regarding our defined benefit plan, see Note 16 of the notes to the 2022/2021 Financial Statements and Note 16 of the notes to the Interim Financial Statements included elsewhere in this offering circular.

We are also subject to the local labor and employment laws of various jurisdictions outside of Korea in which we operate. For example, in China, pursuant to local laws and regulations, we contribute to several insurance and employee welfare schemes for our employees. We make contributions to our employee's social insurance plan, housing fund, basic pension insurance fund, basic medical insurance fund and unemployment, maternity and work-related insurance funds in accordance with applicable Chinese laws and regulations.

### **Legal Proceedings**

We may from time to time become a party to various legal, arbitration or administrative proceedings arising in the ordinary course of business.

For example, we faced several legal and administrative proceedings in recent years in connection with recalls of our battery products or EVs equipped with our battery products. See "Risk Factors – Safety and fire risks relating to rechargeable lithium-ion batteries, related recalls and resulting negative publicity may adversely impact our business."

In 2016, a class action lawsuit was filed against us by plaintiffs in Israel relating to allegations of fixing the price of lithium batteries and lithium battery products sold in Israel. Such claims were suspended due to a technical error regarding the legal procedure. The plaintiffs filed such lawsuit again in June 2023, but we intend to file a motion to dismiss the claims for improper service. Accordingly, no assurance can be provided about the outcome or impact of such lawsuit on us.

Under the relevant provisions of the Korean Commercial Code relating to split-offs, both the subsidiary and the parent company remain jointly and severally liable after the corporate split-off for all of their liabilities existing prior to the corporate split-off unless such joint and several liability has been successfully eliminated through a special resolution adopted at a general meeting of shareholders and protection procedures for creditors of the affected debt, including consents of such creditors or provision of sufficient security for dissenting creditors. Accordingly, we and LG Chem remain jointly and severally liable for each other's debts and other liabilities that existed prior to December 1, 2020, which is the record date of the Split-off, that currently remain outstanding. We are the successor-in-title to all the assets and liabilities and rights and obligations that were related to the operations of the energy solutions segment conducted by LG Chem before the Split-off, as well as all authorized licenses, employment relations, contracts and lawsuits that were directly related to such operations. The remaining assets and liabilities and rights and obligations related to other business areas remain with LG Chem, and we remain jointly and severally liable for such liabilities.

Except as described above, we are not a party to any litigation or other legal or administrative proceedings that may have a material adverse effect on our business, financial condition or results of operations.

## MANAGEMENT

### Board of Directors

Our board of directors has the ultimate responsibility for the administration of our affairs. Our articles of incorporation currently provide for a board of directors to consist of at least three and no more than seven directors. Our board of directors is currently composed of two standing directors, one non-standing director and four outside directors. Directors are elected at a general meeting of shareholders by a majority vote of those present or represented so long as the affirmative votes also represent no less than 25% of the issued and outstanding shares with voting rights. The term of office for our directors is three years, unless a shorter term is approved at the general meeting of shareholders when electing a director. However, the term of office will be extended to the close of the annual general meeting of shareholders if the term of office for the director ends before the close of the annual general meeting of shareholders convened with respect to the last fiscal year within such term of office.

The representative director is a director elected by a majority of the board of directors and is empowered to make decisions regarding our day-to-day business as our chief executive officer. Young Soo Kwon currently serves as our representative director.

The outside directors are non-standing directors elected from among those persons who do not have a special relationship (as defined under, among others, the Korean Commercial Code) with us that would interfere with the exercise of their independent judgment. We elected three outside directors at an extraordinary general meeting of shareholders in June 2021 and one outside director at our annual general meeting of shareholders in March 2023, thereby satisfying the conditions set forth in the Korean Commercial Code. We also established an Outside Director Nomination Committee. Following the listing of our common shares on the KRX KOSPI Market, our outside directors are elected at the general meeting of shareholders from among candidates who meet the qualifications set forth in the Korean Commercial Code, and our Outside Director Nomination Committee is responsible for reviewing and recommending candidates for outside directors at the general meeting of shareholders.

The tables below set forth our directors and executive officers, and their ages and positions, as of the date of this offering circular. The business address of each of our directors and executive officers is at our head office at Parc One Tower 1, 108 Yeoui-daero, Yeongdeungpo-gu, Seoul 07335, Korea.

#### *Directors*

Name	Age	Position	End of current term	Other current positions
Young Soo Kwon . . . . .	66	Chief Executive Officer and Representative Director; Chairman of the Board of Directors	2024	None
Bong Seok Kwon . . . . .	60	Non-standing Director	2025	COO, LG Corp.
Chang Sil Lee . . . . .	59	Chief Financial Officer and Director	2025	None
Mee Nam Shinn . . . . .	62	Outside Director	2024	Outside Director, S-Oil Corporation
Mee Sook Yeo . . . . .	57	Outside Director	2024	Professor of Hanyang University School of Law
Seung Soo Han . . . . .	53	Outside Director	2024	Outside Director, CJ Logistics Professor of Business School, Korea University Vice Chairman, Korean Association for Accounting and Policy Member of Accounting Deliberation Committee, Financial Supervisory Service
Jin Kyu Park . . . . .	57	Outside Director	2026	Specially appointed professor, University Research Institute Industry Collaboration Center, Korea University

*Young Soo Kwon, Chief Executive Officer and Representative Director; Chairman of the Board*

Young Soo Kwon has served as our Chief Executive Officer and Representative Director since November 2021. Previously, Mr. Kwon served as the Chief Operating Officer of LG Corp. from 2018 to 2021, the Chief Executive Officer of LG Uplus Corp. from 2016 to 2018, head of the energy solution business division of LG Chem from 2012 to 2016, the Chief Executive Officer of LG Display Co., Ltd. from 2008 to 2012 and the Chief Executive Officer of LG Philips LCD from 2007 to 2008. Mr. Kwon holds a master's degree in industrial engineering from KAIST and a bachelor's degree in business administration from Seoul National University.

*Bong Seok Kwon, Non-standing Director*

Bong Seok Kwon has served as our Non-standing Director since March 2022. He also currently serves as the Chief Operating Officer of LG Corp. and is a Non-standing Director at LG Chem and LG Electronics. Previously, Mr. Kwon served as the Chief Executive Officer of LG Electronics. He holds an M.B.A. degree from Aalto University and a bachelor's degree in industrial engineering from Seoul National University.

*Chang Sil Lee, Chief Financial Officer*

Chang Sil Lee has served as our Chief Financial Officer and Director since our incorporation in December 2020. Previously, Mr. Lee served as the head of business management for the energy solution business division of LG Chem, from 2019 to 2020. He holds an M.B.A. degree from Aalto University.

*Mee Nam Shinn, Outside Director*

Mee Nam Shinn has served as our Outside Director since June 2021. She also currently serves as an Outside Director at S-Oil Corporation. Prior to that, she served as the Representative Director of Doosan Fuel Cell Korea and the Representative Director at K Auction.

*Mee Sook Yeo, Outside Director*

Mee Sook Yeo has served as our Outside Director since June 2021. She is currently a professor at Hanyang University School of Law and also serves as an Outside Director at CJ Logistics. Previously, she served as a judge at Seoul High Court.

*Seung Soo Han, Outside Director*

Seung Soo Han has served as our Outside Director since June 2021. Mr. Han is a professor of accounting at Korea University Business School. He also currently serves as the Vice Chairman of the Korean Association for Accounting and Policy. Mr. Han holds a Ph.D. in Accounting from University of Illinois at Urbana-Champaign, an M.B.A. and a B.B.A. from Seoul National University.

*Jin Kyu Park, Outside Director*

Jin Kyu Park has served as our Outside Director since March 2023. Mr. Park is a member of the Accounting Deliberation Committee of the Financial Supervisory Service. He is also currently a professor at Korea University. Mr. Park holds a Ph.D. in Economics from University of Birmingham.

## ***Executive Officers***

Our chief executive officer and other executive officers are appointed by the board of directors. Our current executive officers, other than our directors, are as follows:

<b>Name</b>	<b>Title and responsibilities</b>	<b>With us since</b>
Myong Hwan Kim . . . . .	President, Chief Product Officer	December 1, 2020
Dong Myung Kim . . . . .	President, Head of Automobile Battery Business Unit	December 1, 2020
Bang Soo Lee . . . . .	President, CRO and Head of Business Support Center	December 1, 2021
Soo Ryung Kim . . . . .	Executive Vice President, Chief Quality Officer	December 1, 2020
Jin Won Park . . . . .	Executive Vice President, Head of External Relations Group	December 1, 2022
Won Jun Seo . . . . .	Executive Vice President, Head of Small Battery Business Unit	December 1, 2020
Young Jun Shin . . . . .	Executive Vice President, Chief Technology Officer	December 1, 2020
Hyuk Jae Lee . . . . .	Executive Vice President, Head of North American Region and LGESHD	June 1, 2022
Geun Chang Jung . . . . .	Executive Vice President, Head of Project Management Center	December 1, 2020
Suk Won Choi . . . . .	Executive Vice President, Head of Automobile Production Center	December 1, 2020
Geun Tae Kim . . . . .	Executive Director, Head of General Management, LGESWA	January 12, 2021
Ki Soo Kim . . . . .	Executive Director, CHO	December 1, 2022
Dong Soo Kim . . . . .	Executive Director, Head of Procurement Center	December 1, 2020
Sae Won Noh . . . . .	Executive Director, Head of Small Battery R&D Center	December 1, 2020
Kyung Suk Byun . . . . .	Executive Director, CDO	February 21, 2022
Hwan Doo Sung . . . . .	Executive Director, Head of External Affairs	December 1, 2020
Chang Wan Sohn . . . . .	Executive Director, Head of Small Battery Production Center	December 1, 2020
Deuk Jung Lee . . . . .	Executive Director, Head of Quality Management	May 16, 2022
Jang Ha Lee . . . . .	Executive Director, Head of LGESWA	December 1, 2020
Seung Sae Chang . . . . .	Executive Director, Head of ESS Battery Business Unit	December 1, 2020
Jae Han Chung . . . . .	Executive Director, Head of Process Technology Center	December 1, 2020
Jee Hoon Cho . . . . .	Executive Director, Head of Safety Solution Center	January 1, 2021
Seung Don Choi . . . . .	Executive Director, Head of Automobile Battery Development Center	December 1, 2020
Woong Jae Han . . . . .	Executive Director, General Counsel	December 1, 2020

## **Board Practices**

Our articles of incorporation provide for the establishment of the following committees under our board of directors:

- Audit Committee;
- Management Committee;
- Outside Director Nomination Committee; and
- Other special purpose committees as established by our board of directors.

### ***Audit Committee***

Under the Korean Commercial Code and our articles of incorporation, we are required to have an Audit Committee consisting of at least three members, with outside directors accounting for at least two-thirds of the Committee. Members of our Audit Committee are Seung Soo Han, Mee Nam Shinn and Mee Sook Yeo. The committee reviews all audit and compliance-related matters and makes recommendations to our board of directors. Our Audit Committee's primary responsibilities include:

- engaging independent auditors;
- approving independent auditors' fees;
- approving audit and non-audit services;
- reviewing annual financial statements;
- reviewing audit results and reports, including management comments and recommendations;

- reviewing our system of controls and policies, including those covering conflicts of interest and business ethics;
- considering significant changes in accounting practices;
- examining improprieties or suspected improprieties;
- reviewing reports relating to the status of the company's business and assets, and the status of the company's subsidiaries;
- acting as a representative of the company in any lawsuits between the company and its directors; and
- establishing or amending any internal accounting management regulations and evaluating their operational status.

In connection with the annual general meeting of shareholders, the committee examines the agenda for, and financial statements and other reports to be submitted by the board of directors at, each annual general meeting of shareholders. Our external auditors report directly to the Audit Committee. Our Audit Committee holds regular meetings quarterly.

#### ***Management Committee***

Our Management Committee is responsible for reviewing and approving various matters, including routine management-related matters, delegated by our board of directors. Our Management Committee currently consists of two directors: Young Soo Kwon and Chang Sil Lee. Meetings of the Management Committee are held on an ad hoc basis if necessary.

#### ***Outside Director Nomination Committee***

Our Outside Director Nomination Committee is responsible for reviewing and recommending candidates for outside directors at the general meeting of shareholders. Our Outside Director Nomination Committee currently consists of three directors: Jin Kyu Park, Mee Nam Shinn and Bong Seok Kwon. Meetings of our Outside Director Nomination Committee are held on an ad hoc basis if necessary.

#### ***ESG Committee***

Our ESG Committee is responsible for establishing and enforcing policies and strategies relating to certain non-financial aspects of our business, generally consisting of environment, social responsibility and corporate governance matters, in order to promote sustainable development and enhance our corporate value.

The ESG Committee currently consists of five directors: Mee Nam Shinn, Mee Sook Yeo, Seung Soo Han, Jin Kyu Park and Young Soo Kwon. Meetings of the ESG Committee are held biannually, and more often on an ad hoc basis if necessary.

#### ***Related Party Transaction Committee***

Our Related Party Transaction Committee is responsible for reviewing and approving certain related-party and other internal transactions to promote transparency and fair trade compliance. The Related Party Transaction Committee currently consists of four directors: Mee Sook Yeo, Seung Soo Han, Mee Nam Shinn and Chang Sil Lee.

## **Compensation of Directors and Executive Officers**

### ***Remuneration***

The aggregate compensation (including short-term and retirement benefits) granted to our key management, including our directors, was Won 53 billion in 2021, Won 52 billion in 2022, Won 20 billion in the six months ended June 30, 2022 and Won 38 billion in the six months ended June 30, 2023. See Note 30 of the notes to the 2022/2021 Financial Statements and Note 29 of the notes to the Interim Financial Statements included elsewhere in this offering circular. As of June 30, 2023, there were no loans granted by us to any of our directors or executive officers.

### ***Stock Options***

Under Korean law and our articles of incorporation, we may, subject to certain exceptions, grant by special resolution of our shareholders to our directors, officers and employees who have contributed or are expected to contribute to our management, or who meet the qualifications specified under applicable law, options to purchase up to an aggregate of 15% of the total number of our then issued and outstanding shares. As of June 30, 2023, no such stock options have been granted to any of our directors, executive officers or employees.

## **Interests of Directors and Executive Officers**

As of June 30, 2023, there were no outstanding transactions other than in the ordinary course of business undertaken by us in which our directors or executive officers were interested parties.

None of our directors or executive officers has direct or beneficial interests in our shares. Certain of our directors and executive officers have direct or beneficial interests in companies with which we have engaged in transactions, including those in the ordinary course of business. As a result, potential conflicts of interest between their duties to us and their private interests could arise.

## PRINCIPAL SHAREHOLDERS

As of June 30, 2023, we had a total of 234,000,000 common shares issued. The following table sets forth certain information relating to our shareholder composition as of such date.

<u>Shareholder</u>	<u>Number of Common Shares</u>	<u>Common Share Ownership Percentage</u>	<u>Number of Preferred Shares</u>	<u>Preferred Share Ownership Percentage</u>
LG Chem . . . . .	191,500,000	81.8%	—	—
National Pension Service . . . . .	13,486,019	5.8%	—	—
Employee Stock Ownership Association . . . . .	1,973,465	0.8%	—	—
Others . . . . .	<u>27,040,516</u>	<u>11.6%</u>	<u>—</u>	<u>—</u>
Total . . . . .	<u><u>234,000,000</u></u>	<u><u>100.0%</u></u>	<u><u>—</u></u>	<u><u>—</u></u>

Except as described above, no other person or entity or group of persons or entities known by us to be acting in concert, directly or indirectly, owned 5% or more of our issued common shares or exercised control or could exercise control over us as of the date of this offering circular.

## LG GROUP

According to the latest report on Korean business groups released by the Korea Fair Trade Commission on May 1, 2022, LG Group was Korea's fourth-largest business group in terms of combined assets and comprised 73 companies, including 14 that were listed on either the KRX KOSPI Market or the KRX KOSDAQ Market of the Korea Exchange (together, the "KRX Markets"). On June 22, 2022, 12 companies, including 4 that were listed on the KRX Markets, split off from the LG Group and formed the LX Group, following which the LG Group consisted of 61 companies, including 10 that were listed on the KRX Markets. As of December 31, 2022, the total assets of the companies included in the combined financial statements of the LG Group amounted to approximately Won 171 trillion, according to the Korea Fair Trade Commission.

Originating from Lucky Chemical Co., Ltd., which was established in 1947 and initially engaged in the production of cosmetics, plastic goods and household products, LG Group has evolved into a major business group, with interests in the electronics, chemicals, telecommunications, engineering, information technology and power generation industries. Member companies of the LG Group are organized into three sub-groups: the electronics group, the chemicals group and the telecommunications and services group. The following chart shows select member companies of the LG Group as of the date of this offering circular.

<u>Electronics</u>	<u>Chemicals and Batteries</u>	<u>Telecommunications and Services</u>
LG Electronics Inc.	LG Chem, Ltd.	LG Uplus Corp.
LG Display Co., Ltd.	LG Energy Solution	GIIR Corp.
LG Innotek Co., Ltd.		LG CNS Co., Ltd.
		LG Management Development Institute
		LG Sports, Ltd.

## CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

We engage from time to time in various transactions with related parties, which include member companies of the LG Group. See “LG Group.” We believe that we have conducted our transaction with related parties as we would in comparable arm’s-length transactions with a non-related party, on a basis substantially as favorable to us as would be obtainable in such transactions.

Under the Monopoly Regulation and Fair Trade Act of Korea and the regulations thereunder, in the event that (i) we provide funds, securities or assets to, or enter into certain transactions with, a “specially-related” party, which includes affiliates, and (ii) the value of such transaction or provision is greater than either (x) 5% of the greater of our paid-in capital and total capital or (y) Won 5 billion, we are required to obtain approval for such transaction or provision by resolution of our board of directors, and to disclose the main terms and conditions of such transaction or provision to the public. We are currently required to disclose any such transaction or provision within one day following adoption of the relevant resolution.

Under the Korean Commercial Code, in the event that we plan to enter into a transaction with (i) a major shareholder who owns or beneficially owns more than 10% of the total number of our issued and outstanding shares (other than non-voting shares) or exerts influence on our important management issues, (ii) a director, (iii) a spouse or lineal ascendant or descendent of the persons described in (i) and (ii), (iv) a lineal ascendant or descendent of a spouse of the persons described in (i) or (ii), (v) a company in which half or more of the total number of issued and outstanding voting shares is held by a person falling under (i) through (iv), solely or jointly with others, or its subsidiary company, or (vi) a company in which half or more of the total number of issued and outstanding voting shares is held by a person falling under (i) through (iv) together with a company falling under (v), we are required to obtain prior approval by more than two-thirds of our board of directors. In connection with the approval by the board of directors, the major terms of the transaction must be disclosed, and the terms and conditions as well as the procedure of the transaction are required be structured and conducted in a fair manner.

Furthermore, as a publicly listed company in Korea, we are restricted under the Korean Commercial Code from providing any loan, guarantee or collateral to or for the benefit of any of our major shareholders or their specially-related parties, directors (including de facto directors for the purpose of this restriction as provided in the Korean Commercial Code), executive officers or auditors, unless certain exceptions apply. In addition, as a company listed on the Korea Exchange with total assets of not less than Won 2 trillion as of the end of the most recent fiscal year, if we intend to engage in any of the following transactions with or for the benefit of our largest shareholder (or such shareholder’s specially-related parties) or with or for the benefit of any of our other specially-related parties, the Korean Commercial Code generally requires us to obtain approval of our board of directors for such transaction and report relevant information (such as the purpose of the transaction, the identities of the counterparties, the terms and conditions of the transaction and the estimated value of the transaction) at the first regular general meeting of shareholders held after the board meeting approving such transaction, unless certain exceptions apply: (i) any single transaction the value of which amounts to 1% or more of our total assets or total revenue as of the end of the most recent fiscal year; or (ii) any transaction the value of which, when aggregated with all other transactions executed with the relevant counterparty during the same fiscal year, amounts to 5% or more of our total assets or total revenue as of the end of the most recent fiscal year.

A summary of our material transactions with related parties is set forth below. For more information, see Note 30 of the notes to the 2022/2021 Financial Statements and Note 29 of the notes to the Interim Financial Statements included elsewhere in this offering circular.

### **Transactions with LG Electronics Inc.**

Our transactions with LG Electronics and its subsidiaries consist primarily of sales of rechargeable lithium-ion batteries for mobile devices, automotive batteries and ESS batteries and purchases of battery manufacturing equipment. LG Electronics is a manufacturer of consumer electronics goods and a member of the LG Group.

Sales and others to LG Electronics and its subsidiaries amounted to Won 667 billion, Won 1,107 billion, Won 300 billion and Won 1,027 billion in 2021, 2022 and the six months ended June 30, 2022 and 2023, respectively, and total receivables from LG Electronics and its subsidiaries, which mainly consist of trade and other receivables, amounted to Won 124 billion, Won 302 billion and Won 413 billion as of December 31, 2021 and 2022 and June 30, 2023, respectively. Such receivables do not include the provisions for the recall of GM EVs (see “Business–Legal Proceedings.”).

Purchases of raw materials and merchandises from LG Electronics and its subsidiaries amounted to Won 919 billion, Won 376 billion, Won 204 billion and Won 172 billion in 2021, 2022 and the six months ended June 30, 2022 and 2023, respectively, and acquisition of property, plant and equipment and intangible assets from LG Electronics and its subsidiaries amounted to Won 302 billion, Won 524 billion, Won 207 billion and Won 380 billion in 2021, 2022 and the six months ended June 30, 2022 and 2023, respectively. Total payables to LG Electronics and its subsidiaries, which mainly consist of trade and other payables, amounted to Won 175 billion, Won 220 billion and Won 258 billion as of December 31, 2021 and 2022 and June 30, 2023, respectively.

### **Transactions with LG Chem**

Our transactions with LG Chem consist primarily of purchases of raw materials used in our production of lithium-ion batteries. LG Chem is our parent company and is a manufacturer of chemical products and a member of the LG Group.

Purchases of raw materials and merchandises from LG Chem amounted to Won 1,026 billion, Won 2,313 billion, Won 954 billion and Won 1,869 billion in 2021, 2022 and the six months ended June 30, 2022 and 2023, respectively, and total payables to LG Chem, which mainly consist of trade payables, amounted to Won 193 billion, Won 576 billion and Won 833 billion as of December 31, 2021 and 2022 and June 30, 2023, respectively.

### **Transactions with Leyou New Energy Materials (Wuxi) Co., Ltd.**

Our transactions with Leyou New Energy Materials (Wuxi) Co., Ltd., our affiliate, consist primarily of purchases of cathode materials.

Purchases of raw materials and merchandises from Leyou New Energy Materials (Wuxi) Co., Ltd. amounted to Won 614 billion, Won 2,060 billion, Won 714 billion and Won 1,189 billion in 2021, 2022 and the six months ended June 30, 2022 and 2023, respectively, and total payables to Leyou New Energy Materials (Wuxi) Co., Ltd., which mainly consist of trade payables, amounted to Won 121 billion, Won 317 billion and Won 282 billion as of December 31, 2021 and 2022 and June 30, 2023, respectively.

### **Transactions with Directors and Officers**

Certain of our directors and executive officers have also served as directors and executive officers of companies with which we conduct business. None of our directors or executive officers has or had any interest in any of our business transactions that are or were unusual in their nature or conditions or significant to our business.

## TERMS AND CONDITIONS OF THE NOTES

*The following are the terms and conditions of the Notes, to be issued by the Company under the fiscal agency agreement for such Notes, substantially in the form in which they (other than the text in italics) will be endorsed on the definitive certificates for the Notes and referred to in the global notes therefor. The following statements do not purport to be a complete description of the Notes and the fiscal agency agreement for the Notes and are qualified in their entirety by reference to the provisions of the Notes and the fiscal agency agreement for such Notes. Unless otherwise specified, defined terms in this section should be interpreted as being applicable only to the Notes. The terms and conditions for each of the 2026 Notes and the 2028 Notes will only include the bracketed information in Condition 1(a) below applicable to it.*

### 1. General

- (a) This note is one of a duly authorized issue of notes of the Company in the aggregate principal amount of US\$[400,000,000/600,000,000] known as its “[5.625/5.750]% Senior Unsecured Green Notes due [2026/2028]” (the “**Notes**”) issued or to be issued pursuant to a fiscal agency agreement, dated as of September 25, 2023 (as amended from time to time, the “**Fiscal Agency Agreement**”), between the Company, Citicorp International Limited and any successor, as fiscal agent (the “**Fiscal Agent**”), and Citibank, N.A., London Branch and any successor, as registrar (the “**Registrar**”), paying agent (the “**Paying Agent**”) and as transfer agent (the “**Transfer Agent**”), the terms of which are hereby incorporated by reference. Copies of the Fiscal Agency Agreement are on file and available for inspection upon prior written request and satisfaction of proof of holdings at the Fiscal Agent’s office at 20/F, Citi Tower, One Bay East, 83 Hoi Bun Road, Kwun Tong, Kowloon, Hong Kong, and reference thereto is made for a description of the rights and limitations of rights thereunder of the Holders of the Notes and the duties and immunities of the Fiscal Agent. In acting under the Fiscal Agency Agreement, the agents appointed by the Company thereunder are acting solely as agents for the Company and do not assume any obligation or relationship of agency or trust for or with the Holder, except as specifically described below or in the Fiscal Agency Agreement with respect to the Fiscal Agent. The Holders of Notes will be entitled to the benefits of, and be bound by, and deemed to have notice of, all of the provisions of the Fiscal Agency Agreement. As used herein, the term “**Holder**” means the person in whose name a Note is registered in the Note Register (as defined below).
- (b) The Notes are issuable only as fully registered Notes without coupons in denominations of US\$200,000 and any integral multiple of US\$1,000 in excess thereof.
- (c) The Company covenants that until the earlier to occur of the date on which all of the Notes shall have been delivered to the Fiscal Agent for cancellation and the date on which all of the Notes have become due and payable and monies sufficient to pay the principal of and interest on all of the Notes shall have been made available for payment and either paid or returned to the Company as provided herein, the Company will at all times maintain a Fiscal Agent (which in each case shall be a bank or trust company having a combined capital and surplus of at least US\$50,000,000, legally qualified to act as Fiscal Agent). Subject to the foregoing, the Company reserves the right at any time to vary or terminate the appointment of any of the Fiscal Agent and such additional agents as the Company may determine.

### 2. Payments

- (a) Payments of principal of and interest on this Note will be made in such coin or currency of the United States of America as at the time of payment is legal tender for the payment of public and private debts in the United States of America.
- (b) Payment of the principal of this Note shall be made, upon presentation and surrender hereof, by wire transfer to the person to whom interest is payable as provided below.

- (c) Payments of interest on this Note shall be made by transfer to a US\$ account maintained by the payee with a bank in New York, details of which appear on the Note Register on the Record Date (as defined below), subject to the provisions below. The interest so payable on any Interest Payment Date will be paid to the person in whose name this Note is registered at the close of business on the fifteenth day preceding such Interest Payment Date (each, a “**Record Date**”), whether or not a business day, notwithstanding the cancellation, transfer or exchange of this Note subsequent to the Record Date and on or prior to such Interest Payment Date, and no interest otherwise so payable on any Interest Payment Date shall be paid on this Note if the name of its Holder was entered as such on the Note Register after the close of business on the Record Date next preceding such Interest Payment Date, except if and to the extent the Company shall default in the payment of the interest due on such Interest Payment Date, in which case such defaulted interest shall (unless paid together with principal of this Note in full other than on an Interest Payment Date) be paid to the person in whose name this Note is registered at the close of business on a subsequent record date (which shall be not less than five business days prior to the date of payment of such defaulted interest) established by notice given by mail by or on behalf of the Company to the Holders of Notes not less than 15 days preceding such subsequent record date. If interest is paid together with principal in full on a date that is not an Interest Payment Date, such interest shall be paid upon presentation and surrender of this Note to the Fiscal Agent or to a paying agent.
- (d) In any case where the date for the payment of any principal of or interest on any Note is not a day on which banking institutions in Seoul, New York, London and the city where the specified office of the Fiscal Agent is located are open for business (a “**Business Day**”), then payment of such principal or interest need not be made on such date at such place of payment but may be made on the next succeeding day at such place of payment which is a Business Day with the same force and effect as if made on the date for such payment of principal or interest, and no interest shall accrue for the period after such date.
- (e) Any monies paid by the Company to the Fiscal Agent for the payment of the principal of or interest on any Notes and remaining unclaimed at the end of two years after such principal or interest shall have become due and payable and shall have been paid to the Fiscal Agent by the Company shall then be repaid to the Company, and upon such repayment, all liability of the Fiscal Agent with respect to such monies shall thereupon cease and the Holder of any Note representing a claim therefor shall thereafter look only to the Company for payment thereof.
- (f) Notwithstanding the foregoing, so long as Notes in the form of a global note (a “**Global Note**”) are held on behalf of the Depository Trust Company (“**DTC**”), Euroclear Bank SA/NA (“**Euroclear**”), Clearstream Banking S.A. (“**Clearstream**”) or any other clearing system, each payment in respect of such Global Note will be made to the person shown as the Holder in the Note Register at the close of business of the relevant clearing system on the Clearing System Business Day before the due date for such payments, where “**Clearing System Business Day**” means a weekday (Monday to Friday, inclusive) except December 25 and January 1.

### 3. Calculation of Interest

Interest on the Notes will be calculated on the basis of a 360-day year consisting of twelve 30-day months.

### 4. Optional Redemption Due to Changes in Tax Treatment

The Notes may be redeemed at the option of the Company, in whole, but not in part, upon not less than 30 nor more than 60 days’ notice, at any time at a redemption price equal to the principal amount thereof plus accrued interest to (but excluding) the date fixed for redemption if, as a result of any

change in, expiration of or amendment to the laws of the Republic of Korea (“**Korea**”) (or of any political subdivision or taxing authority thereof or therein) or any regulations or rulings promulgated thereunder or any change in the official interpretation or official application of such laws, regulations or rulings, or any change in the official application or interpretation of, or any execution of or amendment to, any treaty or treaties affecting taxation to which Korea (or such political subdivision or taxing authority) is a party, which change, amendment, expiration or treaty becomes effective on or after September 18, 2023, the Company is or would be obligated on the next succeeding due date for a payment with respect to the Notes to pay Additional Amounts (as described in Condition 6 below) with respect to the Notes, and such obligation cannot be avoided by the use of reasonable measures available to the Company; *provided*, however, that (i) no such notice of redemption may be given earlier than 60 days prior to the earliest date on which the Company would be obligated to pay such Additional Amounts, and (ii) at the time such notice of redemption is given, such obligation to pay such Additional Amounts remains in effect. Before giving any notice of such redemption, the Company shall deliver to the Fiscal Agent a certificate of the Company stating that the Company is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of redemption have occurred, together with an opinion of counsel to the effect that such a change in, or amendment to, the laws or treaties of Korea (or of any political subdivision or taxing authority thereof or therein) or any regulations or rulings promulgated thereunder or any change in position regarding the application, administration or interpretation of such laws, treaties, regulations or rulings, has occurred and that all conditions precedent to the right of redemption have occurred.

**5. Purchase**

The Company may at any time purchase Notes by tender (available to all Holders alike) or in the open market at any price. If the Company shall acquire any Notes, such acquisition shall not operate as or be deemed for any purpose to be a satisfaction of the indebtedness represented by such Notes unless and until such Notes are delivered to the Fiscal Agent for cancellation and are canceled and retired by the Fiscal Agent.

**6. Taxation**

All payments of principal of, and interest on, the Notes by the Company will be made without deduction or withholding for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature imposed or levied by or on behalf of Korea or by or within any political subdivision thereof or any authority therein having power to tax (“**Korean Tax**”), unless deduction or withholding of such Korean Tax is required by law. In the event that the deduction or withholding of Korean Tax is required by law, the Company will pay such additional amounts (“**Additional Amounts**”) as will result in the payment to Holders of the Notes of the amounts which would otherwise have been receivable in respect of principal and interest in the absence of such deduction or withholding, except that no such Additional Amount shall be payable in respect of any Note:

- (a) to or on behalf of a Holder who is subject to such Korean Tax in respect of such Note by reason of his being or having been connected with Korea or any political subdivision thereof (including, without limitation, being a citizen or resident or national of, or carrying on a business or maintaining a permanent establishment in, or being physically present in, Korea) otherwise than merely by holding such Note or receiving principal or interest in respect thereof; or
- (b) to or on behalf of a Holder who would not be liable for or subject to such deduction or withholding by making a declaration of non-residence or other similar claim for exemption to the relevant tax authority if, after having been requested in writing by the Company to make such a declaration or claim, such Holder fails to do so within 30 days; or

- (c) to or on behalf of a Holder who presents a Note (where presentation is required) more than 30 days after the relevant date except to the extent that the Holder thereof would have been entitled to such Additional Amounts on presenting a Note for payment on the last day of such 30-day period; for this purpose the “**relevant date**” in relation to any payments of interest on, or principal of, any Note means: (i) the due date for payment thereof; or (ii) if the full amount of the monies payable on such date has not been received by the Fiscal Agent on or prior to such due date, the date on which, the full amount of such monies having been so received, notice to that effect is duly given to Holders of the Notes in accordance with the Fiscal Agency Agreement; or
- (d) to a Holder that is a fiduciary or partnership or a person other than the sole beneficial owner of any such payment, to the extent that a beneficiary or settlor with respect to such fiduciary, a member of such a partnership or the beneficial owner of the payment would not have been entitled to the Additional Amounts had the beneficiary, settlor, member or beneficial owner been the Holder; or
- (e) any combination of paragraphs (a) through (d) above.

The obligation of the Company to pay Additional Amounts in respect of taxes, duties, assessments and governmental charges shall not apply to (a) any estate, inheritance, gift, sales, transfer, personal property or any similar tax, assessment or other governmental charge, (b) any tax, assessment or other governmental charge which is payable otherwise than by deduction or withholding from payments of principal of, or interest on, the Notes, or (c) any tax that would not have been imposed but for a failure by the Holder or beneficial owner (or any financial institution through which the Holder or beneficial owner holds any Note or through which payment on the Note is made) to comply with any certification, information, identification, documentation or other reporting requirements (including entering into and complying with an agreement with the Internal Revenue Service) imposed pursuant to, or under an intergovernmental agreement entered into between the United States and the government of another country in order to implement the requirements of, Sections 1471 through 1474 of the Internal Revenue Code as in effect on the date of issuance of the Notes or any successor or amended version of these provisions, to the extent such successor or amended version is not materially more onerous than these provisions as enacted on such date; *provided* that, except as otherwise set forth in the Notes and in the Fiscal Agency Agreement, the Company shall pay all stamp and other duties, if any, which may be imposed by Korea, the United States or any respective political subdivision thereof or any taxing authority of or in the foregoing, with respect to the Fiscal Agency Agreement or as a consequence of the initial issuance of the Notes.

References to principal or interest in respect of the Notes shall be deemed also to refer to any Additional Amounts which may be payable as set forth in the Notes.

## **7. Transfer, Exchange and Replacement**

- (a) The transfer of a Note is registrable (upon the terms and subject to the conditions set forth in the Fiscal Agency Agreement and subject to the requirements of the Company, the Fiscal Agent and the Registrar) on the Note Register upon surrender of such Note for registration at the Registrar’s office, duly endorsed by, or accompanied by a written instrument of transfer in a form approved by the Company duly executed by, the Holder hereof or his attorney duly authorized in writing.
- (b) In the manner and subject to the limitations and upon payment of the charges (if any) provided in the Fiscal Agency Agreement, Notes may be exchanged for a like aggregate principal amount of Notes of other authorized denominations or for a beneficial interest in a Global Note.

- (c) No service charge shall be made for any exchange or registration of transfer provided for in Conditions 7(a) and 7(b) hereof, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.
- (d) No registrations of transfers or exchanges of Notes shall be made after notice of redemption of the Notes has been given.
- (e) All Notes issued upon any registration of transfer or exchange of Notes shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits, as the Notes surrendered upon such registration of transfer or exchange. Any new Note delivered pursuant to this Condition 7 shall be so dated that neither gain nor loss of interest shall result from such transfer or exchange.
- (f) If any Note shall at any time become mutilated or destroyed or stolen or lost, then, provided that such Note, or evidence of the destruction, theft or loss thereof (together with the indemnity hereinafter referred to and such other documents or proof as may be required in the premises) shall be delivered during business hours to the Registrar's office, a replacement Note of like tenor and principal amount will be issued by the Company and, at its request, authenticated by the Registrar and delivered by the Registrar at its office, in exchange for the Note so mutilated, or in lieu of the Note so destroyed or stolen or lost; *provided further*, that, in the case of destroyed, stolen or lost Notes, (i) neither the Company nor the Registrar shall have notice that such Notes have been acquired by a bona fide purchaser, and (ii) the Company and the Fiscal Agent shall have received evidence satisfactory to them that such Notes were destroyed, stolen or lost, and the Company and the Registrar shall have received an indemnity and/or security and/or prefunding satisfactory to each of them. All expenses and charges associated with procuring such indemnity and/or security and/or prefunding, and the cost of the preparation and issue of a replacement for any Note mutilated, destroyed, stolen or lost, shall be paid by the Holder of such Note. In case such mutilated, destroyed, stolen or lost Note has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Note, pay or cause to be paid such Note. Every new Note issued pursuant to this Paragraph (f) in exchange for or in lieu of any mutilated, destroyed, stolen or lost Note, shall constitute an additional original contractual obligation of the Company, whether or not the mutilated, destroyed, stolen or lost Note shall be at any time enforceable by anyone. Any new Note delivered pursuant to this Paragraph (f) shall be so dated that neither gain nor loss of interest shall result from such replacement. To the extent permitted by law, the provisions of this Paragraph (f) are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, stolen or lost Notes.
- (g) The Company and the Fiscal Agent may deem and treat the registered Holder hereof as the absolute owner hereof (notwithstanding any notice of ownership or other writing hereon) for the purposes of receiving payment hereon or on account hereof and for all other purposes, whether or not this Note shall be overdue.
- (h) The Company has appointed the Registrar as its agent for the registration of transfers, and for exchanges and replacements, of Notes and has agreed to cause to be kept at the Registrar's office a register (the "**Note Register**") in which, subject to such reasonable regulations as it may prescribe, the Company shall provide for such registration and registration of transfers.
- (i) All Notes issued as a result of any transfer, exchange or replacement of Notes shall be delivered to the Holder at the Registrar's office or (at the risk of the Holder) sent by mail to such address as is specified by the Holder in the request for transfer, exchange or replacement.

## 8. Covenants of the Company

(a) **Limitation on Liens.** So long as any of the Notes are outstanding, the Company will not itself, and will not permit any Principal Subsidiary to, create, incur, issue or assume or guarantee any External Indebtedness secured by any mortgage, charge, pledge, encumbrance or other security interest (a “**Lien**”) on any Restricted Property without in any such case effectively providing that the Notes (together with, if the Company shall so determine, any other indebtedness of the Company or such Principal Subsidiary then existing or thereafter created which is not subordinate to 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, plus Attributable Debt of the Company and its Principal Subsidiaries in respect of Sale/Leaseback Transactions entered into after the date of the Fiscal Agency Agreement (other than such Sale/Leaseback Transactions as are permitted by paragraph (2) of Condition 8(b) below), would not exceed 15% of Net Tangible Assets; *provided* that nothing contained in this Condition 8(a) shall prevent, restrict or apply to, and there shall be excluded from secured External Indebtedness in any computation under this Condition 8(a), External Indebtedness secured by.

- (1) any Lien existing on the date of the Fiscal Agency Agreement or any Lien existing on any Restricted Property prior to the acquisition thereof by the Company or any of its Principal Subsidiaries or arising after such acquisition pursuant to contractual commitments entered into prior to and not in contemplation of such acquisition;
- (2) any Lien on any Restricted Property securing External Indebtedness incurred or assumed for the purpose of financing the purchase price thereof or the cost of construction, improvement or repair of all or any part thereof; provided that such Lien attaches to such Restricted Property concurrently with or within twelve months after the acquisition thereof or completion of construction, improvement or repair thereof;
- (3) any Lien existing on any Restricted Property of any Principal Subsidiary prior to the time such Principal Subsidiary becomes a Subsidiary of the Company or arising after such time pursuant to contractual commitments entered into prior to and not in contemplation thereof;
- (4) any Lien securing External Indebtedness owing to the Company or to a Principal Subsidiary; or
- (5) any Lien arising out of the refinancing, extension, renewal or refunding of any External Indebtedness secured by any Lien permitted by any of the foregoing clauses, to the extent of the amount of such External Indebtedness; provided that such External Indebtedness is not secured by any additional Relevant Property.

For the purposes of this Condition 8(a) and Condition 8(b), the giving of a guarantee which is secured by a Lien on any Restricted Property, and the creation of a Lien on any Restricted Property to secure External Indebtedness which existed prior to the creation of such Lien, will be deemed to involve the creation of indebtedness in an amount equal to the principal amount guaranteed or secured by such Lien; but the amount of indebtedness secured by Liens on Restricted Properties shall be computed without cumulating the underlying indebtedness with any guarantee thereof or Lien securing the same.

(b) **Limitation on Sale and Leaseback Transactions.** So long as any of the Notes are outstanding, the Company will not itself, and will not permit any Principal Subsidiary to, enter into any Sale/Leaseback Transaction after the date of the Fiscal Agency Agreement unless, either:

- (1) the Attributable Debt of the Company and its Principal Subsidiaries in respect of such Sale/Leaseback Transaction and all other Sale/Leaseback Transactions entered into after the date of the Fiscal Agency Agreement (other than such Sale/Leaseback Transactions as are permitted by paragraph (2) below), plus the aggregate principal amount of External Indebtedness secured by Liens on Restricted Properties then outstanding (excluding any such External Indebtedness secured by Liens covered in paragraphs (1) through (5) in Condition 8(a)) without equally and ratably securing the Notes, would not exceed 15% of Net Tangible Assets; or
- (2) the Company, within twelve months after such Sale/Leaseback Transaction, applies or causes a Principal Subsidiary, as the case may be, to apply an amount equal to the net proceeds of such sale or transfer of the Restricted Property which is the subject of such Sale/Leaseback Transaction to the retirement of External Indebtedness of the Company or a Principal Subsidiary, as the case may be, which is not subordinate to the Notes; *provided* that the amount to be so applied shall be reduced by (i) the principal amount of Notes delivered within twelve months after such Sale/Leaseback Transaction to the Fiscal Agent for retirement and cancellation, and (ii) the principal amount of External Indebtedness of the Company or a Principal Subsidiary, other than the Notes, voluntarily retired by the Company or a Principal Subsidiary within twelve months after such Sale/Leaseback Transaction. Notwithstanding the foregoing, no retirement referred to in this clause may be effected by payment at maturity or pursuant to any mandatory sinking fund payment or any mandatory prepayment provision.

Notwithstanding the foregoing, where the Company or any Principal Subsidiary is the lessee in any Sale/Leaseback Transaction, Attributable Debt shall not include any External Indebtedness resulting from the guarantee by the Company or any other Principal Subsidiary of the lessee's obligation thereunder. The restrictions in this Condition 8(b) shall not apply to any transaction between the Company and a Subsidiary or between a Principal Subsidiary and a Subsidiary.

- (c) **Certain Definitions.** The following terms (except as otherwise expressly provided or unless the context otherwise clearly requires) for all purposes of the Fiscal Agency Agreement and the Notes shall have the respective meanings specified in this Condition. All accounting terms used herein and not expressly defined shall have the meanings given to them in accordance with K-IFRS, and the term “**K-IFRS**” shall mean International Financial Reporting Standards as adopted by Korea.

“**Attributable Debt**” means, with respect to any Sale/Leaseback Transaction, the lesser of (x) the fair market value of the Restricted Property subject to such transaction and (y) the present value (discounted at a rate per annum equal to the discount rate of a capital lease obligation with a like term in accordance with K-IFRS) of the obligations of the lessee for net rental payments (excluding amounts on account of maintenance and repairs, insurance, taxes, assessments and similar charges) during the term of the lease.

“**External Indebtedness**” means any obligation for the payment or repayment of money borrowed which is payable to a person other than a bank located in Korea, a governmental institution of Korea or a branch outside Korea of a bank incorporated in Korea.

“**Long-term Debt**” means any obligation for payment or repayment of money borrowed having a maturity of more than one year from the date such indebtedness was incurred or having a maturity of less than or equal to one year but by its terms being renewable or extendible, at the option of the borrower, beyond one year from the date such indebtedness was incurred.

“**Net Tangible Assets**” means, at any date, the total amount of assets of the Company and its consolidated Subsidiaries, including investments in unconsolidated Subsidiaries, after deducting therefrom (a) all current liabilities (excluding any current liabilities constituting Long-term Debt by reason of their being renewable or extendible at the option of the Company or the consolidated Subsidiary in question, as the case may be), (b) all goodwill, trade names, trademarks, patents, unamortized debt discount and expense and other like intangible assets, and (c) all write-ups of fixed assets, net of accumulated depreciation thereon, after December 31, 2022, other than as permitted by the laws of Korea applicable to the Company, all as set forth on the most recent balance sheet of the Company and its consolidated Subsidiaries and computed in accordance with K-IFRS.

“**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 Subsidiary**” means:

- (a) any Subsidiary of the Company under K-IFRS:
  - (i) whose revenue, as shown by the then latest audited accounts (consolidated where applicable) of such Subsidiary, constitute at least 10% of the consolidated revenue of the Company as shown by the then latest audited consolidated accounts of the Company; or
  - (ii) whose total assets, as shown by the then latest audited accounts (consolidated where applicable) of such Subsidiary, constitute at least 10% of the total consolidated assets of the Company as shown by the then latest audited consolidated accounts of the Company,

**provided that:**

- (A) in the case of a Subsidiary acquired, or a company becoming a Subsidiary, after the end of the financial period to which the latest audited consolidated accounts of the Company relate, the reference to the then latest audited consolidated accounts of the Company for the purposes of the calculation above shall, until audited consolidated accounts of the Company for the financial period in which the acquisition is made or, as the case may be, in which the relevant company becomes a Subsidiary are published, be deemed to be a reference to the then latest audited consolidated accounts of the Company adjusted to consolidate the latest audited accounts (consolidated where applicable) of such Subsidiary in such accounts;
- (B) if at any relevant time in relation to the Company or any Subsidiary in respect of which financial consolidation is relevant, no consolidated accounts are prepared and audited, revenue and total assets of the Company and/or any such Subsidiary shall be determined on the basis of pro forma consolidated accounts prepared for this purpose as of the date of the latest audited accounts of the Company by the auditors for the time being of the Company;
- (C) if at any relevant time in relation to any Subsidiary no accounts are audited, its revenue and total assets (consolidated where applicable) shall be determined on the basis of pro forma accounts (consolidated where

applicable) of the relevant Subsidiary prepared for this purpose as of the date of the latest audited accounts of the Company by the auditors for the time being of the Company; and

- (D) if the accounts of any Subsidiary (not being a Subsidiary referred to in proviso (A) above) are not consolidated with those of the Company, then the determination of whether or not such a Subsidiary is a Principal Subsidiary shall be based on pro forma consolidation of its accounts (consolidated where applicable) with the then latest consolidated audited accounts (determined on the basis of the foregoing) of the Company; or
- (b) any Subsidiary of the Company to which is transferred all or substantially all of the assets of a Subsidiary which immediately prior to such transfer was a Principal Subsidiary, provided that the Principal Subsidiary which so transfers its assets shall forthwith upon such transfer cease to be a Principal Subsidiary.

**“Restricted Property”** means (a) any facility, whether owned at the date of issuance of the Notes or thereafter acquired, used for the production of basic materials and chemicals, energy solutions, IT and electric materials and advanced materials or life sciences products of the Company or any Subsidiary, including any land, buildings, structures or machinery and other fixtures that constitute any such facility, or portion thereof, other than any such facility, or portion thereof, reasonably determined by the board of directors of the Company not to be of material importance to the total business conducted by the Company and its Subsidiaries as a whole, and (b) any share of common stock or participating preferred stock of a Principal Subsidiary.

**“Sale/Leaseback Transaction”** means any arrangement with any person which provides for the leasing by the Company or any Principal Subsidiary, for an initial term of three years or more, of any Restricted Property, whether owned at the date of issuance of the Notes or thereafter acquired, which is to be sold or transferred by the Company or any Principal Subsidiary after the date of issuance of the Notes to such person for a sale price of US\$10,000,000 (or the equivalent thereof) or more where the rental payments are denominated in a currency other than the currency of Korea.

**“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 Company.

- (d) **Provision of Information to Holders.** The Company covenants that if, and for so long as, this Note is a “restricted security” within the meaning of Rule 144 under the United States Securities Act of 1933, as amended (the “**Securities Act**”), the Company shall, at any time when it is not subject to the periodic reporting requirements of Section 13 or Section 15(d) of the United States Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), and is not exempt from such requirements pursuant to Rule 12g3-2(b) thereunder, provide to any Holder of this Note or prospective purchaser of this Note designated by such Holder, upon the request of such prospective purchaser or Holder, the information required to be provided by Rule 144A(d)(4) under the Securities Act.

## 9. Merger and Consolidation

Nothing contained in the Fiscal Agency Agreement or in the Notes shall prevent any consolidation of the Company with, or merger of the Company into, any other corporation or corporations (whether or not affiliated with the Company), or successive consolidations or mergers to which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, transfer, lease or

conveyance of the property of the Company as an entirety or substantially as an entirety; *provided* that (a) in case the Company shall consolidate with or merge into another corporation, or sell, transfer, lease or convey its property as an entirety or substantially as an entirety to any corporation, the corporation formed by such consolidation or into which the Company is merged or the corporation which acquires by sale, transfer, lease or conveyance the property of the Company as an entirety or substantially as an entirety shall be a corporation organized under the laws of Korea and shall expressly assume, if not assumed by law or by other means, by an agreement supplemental to the Fiscal Agency Agreement executed and delivered to the Fiscal Agent, the due and punctual payment of the principal of and interest on the Notes, and any Additional Amounts, according to their tenor, and the due and punctual performance and observance of all of the covenants and conditions of the Fiscal Agency Agreement and the Notes on the part of the Company to be performed or observed; (b) immediately after giving effect to such transaction and treating any indebtedness which becomes an obligation of the Company as a result of such transaction as having been incurred by the Company at the time of such transaction, no Event of Default (as defined below), and no event which, after notice or lapse of time or both, would become an Event of Default, shall have occurred and be continuing; (c) if, as a result of any such consolidation or merger or such sale, transfer, lease or conveyance, properties or assets of the Company or a Subsidiary would become subject to a Lien which would not be permitted by the Notes, the Company or such successor corporation, as the case may be, shall take such steps as shall be necessary effectively to secure the Notes (together with, if the Company shall so determine, any other indebtedness of the Company or such Subsidiary then existing or thereafter created which is not subordinate to the Notes) equally and ratably with (or prior to) all indebtedness secured thereby; and (d) the Company has delivered to the Fiscal Agent an Officer's Certificate and an opinion of counsel as to matters of law stating that such consolidation, merger, sale, transfer, lease or conveyance and, if a supplemental agreement is required in connection with such transaction, such supplemental agreement comply with the Fiscal Agency Agreement and the Notes and that all conditions precedent herein provided for relating to such transaction have been complied with.

In case of any such consolidation, merger, sale, transfer, lease or conveyance, and following such an assumption by the successor corporation permitted under this Condition 9, such successor corporation shall succeed to and be substituted for the Company, with the same effect as if it had been named herein.

Such successor corporation may cause to be signed, and may issue either in its own name or in the name of the Company prior to such succession any or all of the Notes issuable hereunder which theretofore shall not have been signed by the Company and delivered to the Registrar; and, upon the order of such successor corporation, instead of the Company, and subject to all the terms, conditions and limitations in the Fiscal Agency Agreement prescribed, the Registrar shall authenticate and shall make available for delivery any Notes which previously shall have been signed and delivered by the officers of the Company to the Registrar for authentication, and any Notes which such successor corporation thereafter shall cause to be signed and delivered to the Registrar for that purpose. All of the Notes so issued shall in all respects have the same legal rank and benefit under the Fiscal Agency Agreement as the Notes theretofore or thereafter issued in accordance with the terms of the Fiscal Agency Agreement as though all of such Notes had been issued at the date of the execution hereof.

In case of any such consolidation, merger, sale, transfer, lease or conveyance such changes in phraseology and form (but not in substance) may be made in the Notes thereafter to be issued as may be appropriate.

In the event of any such sale, transfer or conveyance (other than a conveyance by way of lease) by the Company or any successor corporation which shall theretofore have become such successor corporation in the manner described in this Condition 9, the Company or such successor corporation, as the case may be, shall be discharged from all obligations and covenants under the Fiscal Agency Agreement and the Notes and may be liquidated and dissolved.

## 10. Events of Default

The term “**Event of Default**” means any of the following events (whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body) which shall have occurred and be continuing:

- (a) default in the payment of any installment of interest upon any of the Notes, whether at maturity, upon redemption or otherwise, as and when the same shall become due and payable, and continuance of such default for a period of 30 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; or
- (c) failure on the part of the Company duly to observe or perform any other of the covenants or agreements on the part of the Company contained in the Notes or in the Fiscal Agency Agreement 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 Company remedy the same, shall have been given to the Company by the Holders of at least 10% in aggregate principal amount of the Notes at the time outstanding; or
- (d) any External Indebtedness of the Company in the aggregate outstanding principal amount of US\$30,000,000 or more either (i) becoming due and payable prior to the due date for payment thereof by reason of acceleration thereof following default by the Company 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 Company in respect of External Indebtedness of any other person in the aggregate principal amount of US\$30,000,000 or more not being honored when, and remaining dishonored after becoming, due and called, *provided* that, in the case of (i) above, if any such default under any such External 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 Company 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 Company or for any substantial part of its property or ordering the winding up, dissolution or liquidation of its affairs, or shall otherwise adjudicate or find the Company to be bankrupt or insolvent and such decree or order shall remain unstayed and in effect for a period of 60 consecutive days; or
- (f) the Company 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 Company or for any substantial part of its property, or cease to carry on the whole or substantially the whole of its business (except as provided in Condition 9) or make any general assignment for the benefit of creditors, or enter into any composition with its creditors, or take corporate action in furtherance of any such action.

If such Event of Default is continuing, the Holders of 25% or more in aggregate principal amount of the Notes then outstanding may, by written demand to the Company at the office of the Fiscal Agent, declare all of the Notes then outstanding to be immediately due and payable. Upon such declaration, the Fiscal Agent shall give notice thereof to the Company and to the Holders of the Notes, by mail and

publication. If, after any such declaration and before any judgment or decree for the payment of the monies due shall have been obtained or entered, the Company pays or deposits with the Fiscal Agent all amounts then due with respect to the Notes (other than amounts due solely because of such declaration) and cures all other Events of Default with respect to the Notes, such defaults may be waived and such declaration may be annulled and rescinded by the Holders of more than 50% in aggregate principal amount of the Notes then outstanding, by written notice thereof to the Company at the office of the Fiscal Agent.

#### **11. Meetings of Holders; Modifications and Amendments**

- (a) The Company may at any time, and the Fiscal Agent shall at any time after the Notes shall have become immediately due and payable due to a default upon a request in writing made by Holders holding not less than 10% of the aggregate outstanding principal amount of the Notes, convene a meeting of Holders of the Notes. Any such request in writing by the Holders shall be delivered to the Fiscal Agent. Further provisions concerning meetings of the Holders are set forth in the Fiscal Agency Agreement.
- (b) Modifications and amendments to the Fiscal Agency Agreement or the Notes requiring consent of Holders may be made, and future compliance therewith or past defaults by the Company may be waived, with the consent of the Company and the Holders of more than 50% in aggregate principal amount of the Notes at the time outstanding, or of such lesser percentage as may act at a meeting of Holders held in accordance with the provisions of the Fiscal Agency Agreement; *provided* that no such modification, amendment or waiver of the Fiscal Agency Agreement or any Note may, without the consent of each Holder affected thereby, (i) change the stated maturity of the principal of, or date for the payment of interest on, any such Note; (ii) reduce the principal of or interest on any such Note; (iii) change the currency of payment of the principal of or interest on any such Note; or (iv) reduce the above-stated percentage of aggregate principal amount of Notes outstanding or reduce the quorum requirements or the percentage of votes required for the taking of any action. Any modifications, amendments or waivers consented to or approved at a meeting will be conclusive and binding on all Holders of Notes whether or not they have given such consent or were present at such meeting, and on all future Holders of Notes whether or not notation of such modifications, amendments or waivers is made upon the Notes. Any instrument given by or on behalf of any Holder of a Note in connection with any consent to any such modification, amendment or waiver will be irrevocable once given and will be conclusive and binding on all subsequent Holders of such Note.
- (c) At a meeting of the Holders of the Notes called for any of the above purposes, persons entitled to vote a majority in aggregate principal amount of the Notes at the time outstanding shall constitute a quorum. In the absence of a quorum at any such meeting, the meeting may be adjourned for a period of not less than ten days; in the absence of a quorum at any such adjourned meeting, such adjourned meeting may be further adjourned for a period of not less than ten days; at the reconvening of any meeting further adjourned for lack of a quorum, the persons entitled to vote 25% in aggregate principal amount of the Notes at the time outstanding shall constitute a quorum for the taking of any action set forth in the notice of the original meeting. At a meeting or an adjourned meeting duly convened and at which a quorum is present as aforesaid, any resolution to modify or amend, or to waive compliance with, any of the covenants or conditions referred to above (other than those set forth in paragraphs (i) through (iv) of Condition 11(b) hereof) shall be effectively passed if passed by the persons entitled to vote the lesser of (i) a majority in aggregate principal amount of Notes then outstanding or (ii) 75% in aggregate principal amount of the Notes represented and voting at the meeting.

- (d) The Fiscal Agency Agreement and the terms and conditions of the Notes may be modified, supplemented or amended, without the consent of the Holder of any Note, for the purposes of (i) adding to the covenants of the Company for the benefit of the Holders; (ii) surrendering any right or power conferred upon the Company; (iii) securing the Notes; (iv) curing any ambiguity, correcting or supplementing any defective provision herein; (v) evidencing the succession of another corporation to the Company and the assumption by it of the covenants, agreements and obligations of the Company under the Fiscal Agency Agreement and in, or with respect to, the Notes; (vi) adding any additional events of default, *provided* that any such additional event of default would not cause any Notes to be in default immediately upon any such addition; (vii) evidencing and providing for the acceptance of appointment of a successor Fiscal Agent with respect to the Notes and to add to or change any provisions of the Fiscal Agency Agreement that shall be necessary to provide for or facilitate the administration by more than one Fiscal Agent; or (viii) in regard to such matters or questions as the Company may deem necessary or desirable, *provided* that such action shall in the opinion of the Company not adversely affect in any material respect the interests of the Holders of the Notes at the time outstanding. Any determination as to adverse effect on the interests of the Holders pursuant to these Conditions shall be made by the Company and none of the Fiscal Agent, the Registrar or the Transfer Agent shall have any responsibility or liability whatsoever with respect to such determination. In all other cases, amendment of the Fiscal Agency Agreement will require consent of the Holders pursuant to a resolution of the Holders of the Notes adopted pursuant to Section 14 of the Fiscal Agency Agreement and the Notes.

## **12. Notices to Holders**

Except as otherwise expressly provided herein or the Fiscal Agency Agreement, whenever the Fiscal Agency Agreement or a Note requires that the Company give notice to the Holder hereof, the Company will cause such notice to be mailed to the Holders of Notes at their respective addresses as they appear in the Note Register. If by reason of the suspension of regular mail service, or by reason of any other cause, it shall be impracticable to give notice to the Holders of Notes in the manner prescribed herein, then such notification in lieu thereof as shall be made by the Company shall constitute sufficient provision of such notice, if such notification shall, so far as may be practicable, approximate the terms and conditions of the notice in lieu of which it is given. Neither the failure to give notice nor any defect in any notice given to any particular Holder of a Note shall affect the sufficiency of any notice with respect to other Notes.

So long as the Notes are represented by Global Notes and the Global Notes are held on behalf of DTC, Euroclear, Clearstream or an alternative clearing system appointed in accordance with the terms of the Notes and the Fiscal Agency Agreement, notices to Holders may be given by delivery of the relevant notice to the clearing systems in accordance with the applicable rules and procedures of the clearing systems for communication by them to entitled accountholders. Any such notice shall be deemed validly given on the day after it has been delivered to DTC, Euroclear, Clearstream or an alternative clearing system as aforesaid.

## **13. Valid Obligations**

The Company hereby certifies and declares that all acts, conditions and things required to be done and performed and to have happened precedent to the creation and issuance of this Note, and to constitute the same the valid and legally binding obligation of the Company enforceable in accordance with its terms, have been done and performed and have happened in due and strict compliance with the applicable laws of the State of New York.

## **14. Governing Law**

The Notes shall be governed by, and interpreted in accordance with, the laws of the State of New York.

The Company (a) agrees that any legal suit, action or proceeding arising out of or based upon these terms and conditions may be instituted in any state or federal court in the Borough of Manhattan, the State and City of New York, United States of America; (b) waives, to the extent it may effectively do so and to the extent permitted by applicable law, any objection which it may have now or hereafter to the laying of the venue of any such suit, action or proceeding, and waives any right to trial by jury; and (c) irrevocably submits to the jurisdiction of any such court in any such suit, action or proceeding. The Company hereby designates Capitol Services, Inc., as the Company's authorized agent to accept and acknowledge on its behalf service of any and all process which may be served in any such suit, action or proceeding in any such court and agrees that service of process upon said agent at its office at 1218 Central Avenue, Suite 100, Albany NY 12205 (or at such other address as such agent may designate by written notice to the Company and the Fiscal Agent), and written notice of said service to the Company, mailed or delivered to it, at 61st Floor, Parc One Tower 1, 108 Yeoui-daero, Yeongdeungpo-gu, Seoul 07335, Korea, Attention: Finance Team, shall be deemed in every respect effective service of process upon the Company in any such suit, action or proceeding and shall be taken and held to be valid personal service upon the Company, whether or not the Company shall then be doing, or at any time shall have done, business within the State of New York, and that any such service of process shall be of the same force and validity as if service were made upon it according to the laws governing the validity and requirements of such service in such State, and to the extent permitted by applicable law, waives all claim of error by reason of any such service. Neither such appointment nor such acceptance of jurisdiction shall be interpreted to include actions brought under the United States federal securities laws. If for any reason such agent shall cease to be such agent for the service of process, the Company shall forthwith appoint a new agent for service of process in New York and deliver to the Fiscal Agent a copy of the new agent's acceptance of that appointment within 30 days.

## CLEARANCE AND SETTLEMENT

We have obtained the information in this section from sources we believe to be reliable, including from DTC, Euroclear and Clearstream. We accept responsibility only for accurately extracting information from such sources. DTC, Euroclear and Clearstream are under no obligation to perform or continue to perform the procedures described below, and they may modify or discontinue them at any time. Neither we nor the registrar will be responsible for DTC's, Euroclear's or Clearstream's performance of their obligations under their rules and procedures, or for the performance by their direct or indirect participants of obligations under their rules and procedures.

### **Introduction**

#### *The Depository Trust Company*

DTC is:

- a limited-purpose trust company organized under the New York Banking Law;
- a “banking organization” under the New York Banking Law;
- a member of the Federal Reserve System;
- a “clearing corporation” under the New York Uniform Commercial Code; and
- a “clearing agency” registered under Section 17A of the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”).

DTC was created to hold securities for its participants and to facilitate the clearance and settlement of securities transactions between its participants. It does this through electronic book-entry changes in the accounts of its direct participants, eliminating the need for physical movement of securities certificates. 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.

#### *Euroclear and Clearstream*

Like DTC, Euroclear and Clearstream hold securities for their participants and facilitate the clearance and settlement of securities transactions between their participants through electronic book-entry changes in their accounts. Euroclear and Clearstream provide various services to their participants, including the safekeeping, administration, clearance and settlement and lending and borrowing of internationally traded securities. Participants in Euroclear and Clearstream are financial institutions such as underwriters, securities brokers and dealers, banks and trust companies. Other banks, brokers, dealers and trust companies have indirect access to Euroclear or Clearstream by clearing through or maintaining a custodial relationship with a Euroclear or Clearstream participant.

#### *Ownership of the Notes through DTC, Euroclear and Clearstream*

We will issue the Notes in the form of one or more fully registered global notes, registered in the name of a nominee of DTC. Financial institutions, acting as direct and indirect participants in DTC, will represent your beneficial interests in the global notes. These financial institutions will record the ownership and transfer of your beneficial interests through book-entry accounts. You may hold your beneficial interests in the global notes through DTC, if you are a participant in DTC, or indirectly through organizations that are participants in DTC. Euroclear and Clearstream will hold their participants' beneficial interests in the global notes in their customers' securities accounts with their depositories. These depositories of Euroclear and Clearstream, in turn, will hold such interests in their customers' securities accounts with DTC.

We and the Fiscal Agent generally will treat the registered holder, initially Cede & Co., as the absolute owner of the Notes for all purposes. Once we and the Fiscal Agent make payments to the registered holder, we and the Fiscal Agent will no longer be liable on the Notes for the amounts so paid. Accordingly, if you own a beneficial interest in the global notes, you must rely on the procedures of the institutions through which you hold your interests in the Notes, including DTC, Euroclear, Clearstream and their respective participants, to exercise any of the rights granted to holders of such Notes. Under existing industry practice, if you desire to take any action that Cede & Co., as the holder of the global notes, is entitled to take, then Cede & Co. would authorize the DTC participant through which you own your beneficial interest to take such action. The DTC participant would then either authorize you to take the action or act for you on your instructions.

DTC may grant proxies or authorize its participants, or persons holding beneficial interests in the Notes through such participants, to exercise any rights of a holder or take any actions that a holder is entitled to take under the Fiscal Agency Agreement or the Notes.

Euroclear's or Clearstream's ability to take actions as holder under the Notes or the Fiscal Agency Agreement will be limited by the ability of their respective depositaries to carry out such actions for them through DTC. Euroclear and Clearstream will take such actions only in accordance with their respective rules and procedures.

The fiscal agent will not charge you any fees for the Notes, other than reasonable fees and indemnity satisfactory to the fiscal agent for the replacement of lost, stolen, mutilated or destroyed Notes. However, you may incur fees for the maintenance and operation of the book-entry accounts with the clearing systems in which your beneficial interests are held.

#### **Transfers Within and Between DTC, Euroclear and Clearstream**

##### ***Trading Between DTC Purchasers and Sellers***

DTC participants will transfer interests in the Notes among themselves in the ordinary way according to DTC rules. DTC participants will pay for such transfers by wire transfer. The laws of some states require certain purchasers of securities to take physical delivery of the securities in definitive form. These laws may impair your ability to transfer beneficial interests in the global notes to such purchasers. DTC can act only on behalf of its direct participants, who, in turn, act on behalf of indirect participants and certain banks. Thus, your ability to pledge a beneficial interest in the global notes to persons that do not participate in the system, and to take other actions, may be limited because you will not possess a physical certificate that represents your interest.

##### ***Trading Between Euroclear or Clearstream Participants***

Euroclear or Clearstream participants will transfer interests in the Notes among themselves according to the rules and operating procedures of Euroclear and Clearstream.

##### ***Trading Between a DTC Seller and a Euroclear or Clearstream Purchaser***

When the Notes are to be transferred from the account of a DTC participant to the account of a Euroclear or Clearstream participant, the purchaser must first send instructions to Euroclear or Clearstream through a participant at least one business day prior to the settlement date. Euroclear or Clearstream will then instruct its depositary to receive the Notes and make payment for them. On the settlement date, the depositary will make payment to the DTC participant's account, and the Notes will be credited to the depositary's account. After settlement has been completed, DTC will credit the Notes to Euroclear or Clearstream, Euroclear or Clearstream will credit the Notes, in accordance with its usual procedures, to its participant's account, and the participant will then credit the purchaser's account. These securities credits will appear the next day (European time) after the settlement date. The cash debit from the account of Euroclear or Clearstream will be back-valued to the value date, which will be the preceding day if settlement occurs in New York. If settlement is not completed on the intended value date (i.e., the trade fails), the cash debit will instead be valued at the actual settlement date.

Participants in Euroclear and Clearstream will need to make funds available to Euroclear or Clearstream to pay for the Notes by wire transfer on the value date. The most direct way of doing this is to pre-position funds (i.e., have funds in place at Euroclear or Clearstream before the value date), either from cash on hand or existing lines of credit. Under this approach, however, participants may take on credit exposure to Euroclear and Clearstream until the Notes are credited to their accounts one day later.

As an alternative, if Euroclear or Clearstream has extended a line of credit to a participant, the participant may decide not to pre-position funds, but to allow Euroclear or Clearstream to draw on the line of credit to finance settlement for the Notes. Under this procedure, Euroclear or Clearstream would charge the participant overdraft charges for one day, assuming that the overdraft would be cleared when the Notes were credited to the participant's account. However, interest on such Notes would accrue from the value date. Therefore, in many cases the interest income on the Notes which the participant earns during that one-day period will substantially reduce or offset the amount of the participant's overdraft charges. Of course, this result will depend on the cost of funds (i.e., the interest rate that Euroclear or Clearstream charges) to each participant.

Since the settlement will occur during New York business hours, a DTC participant selling an interest in the Notes can use its usual procedures for transferring global securities to the depositories of Euroclear or Clearstream for the benefit of Euroclear or Clearstream participants. The DTC seller will receive the sale proceeds on the settlement date. Thus, to the DTC seller, a cross-market sale will settle no differently than a trade between two DTC participants.

#### ***Trading Between a Euroclear or Clearstream Seller and a DTC Purchaser***

Due to time-zone differences in their favor, Euroclear and Clearstream participants can use their usual procedures to transfer Notes through their depositories to a DTC participant. The seller must first send instructions to Euroclear or Clearstream through a participant at least one business day prior to the settlement date. Euroclear or Clearstream will then instruct its depository to credit the Notes to the DTC participant's account and receive payment. The payment will be credited to the account of the Euroclear or Clearstream participant on the following day, but the receipt of the cash proceeds will be back-valued to the value date, which will be the preceding day if settlement occurs in New York. If settlement is not completed on the intended value date (i.e., the trade fails), the receipt of the cash proceeds will instead be valued at the actual settlement date.

If the Euroclear or Clearstream participant selling the Notes has a line of credit with Euroclear or Clearstream and elects to be in debit for the Notes until it receives the sale proceeds in its account, then the back-valuation may substantially reduce or offset any overdraft charges that the participant incurs over that period.

Settlement in other currencies between DTC and Euroclear and Clearstream is possible using free-of-payment transfers to move the Notes, but funds movement will take place separately.

## TAXATION

The following summary is based upon the tax laws of Korea and the United States as in effect on the date of this offering circular, and is subject to any change in the tax laws of Korea or the United States that may come into effect after such date. This summary does not purport to be a legal opinion or to address all tax aspects that may be relevant to a holder of the Notes. Investors in the Notes are advised to consult their own tax advisers as to the tax consequences under the tax laws of Korea or the United States or any other consequences of the purchase, ownership and disposition of the Notes, including the effect of any national, state or local tax laws.

### **Korean Taxation**

The taxation of non-resident individuals and non-resident corporations (“Non-Residents”) depends on whether they have a “permanent establishment” (as defined under Korean law and applicable tax treaty) in Korea to which the relevant Korean source income is attributable or with which such income is effectively connected. Non-Residents without a permanent establishment in Korea are taxed in the manner described below. Non-Residents with permanent establishments in Korea are taxed in accordance with different rules.

#### ***Tax on Interest***

Interest on the Notes paid to Non-Residents, being foreign currency-denominated bonds issued outside of Korea, is exempt from income tax and corporation tax (whether payable by withholding or otherwise) pursuant to the Special Tax Treatment Control Law (the “STTCL”).

If the tax exemption under the STTCL referred to above were to cease to be in effect, the rate of income tax or corporation tax applicable to interest on the Notes, for a Non-Resident without a permanent establishment in Korea, would be 14% of income. In addition, a tax surcharge called a local income tax would be imposed at the rate of 10% of the income or corporation tax (raising the total tax rate to 15.4%).

The tax rates may be reduced by an applicable tax treaty, convention or agreement between Korea and the country of the recipient of the income.

In order to obtain the benefit of a reduced rate available under applicable tax treaties, a Non-Resident holder must submit an application for reduced rate to the party liable for the withholding before the receipt of the relevant interest payment (if there is no change in the contents of such application, it is not required to submit such application again within three years thereafter), together with a certificate of the Non-Resident holder’s tax residence issued by a competent authority of the Non-Resident’s resident country under certain circumstances. If the Non-Resident holder was unable to receive the benefit of a reduced rate due to his or her failure to timely submit the aforementioned application, the Non-Resident holder may still receive a tax treaty benefit by submitting evidentiary documents to the relevant tax office within five years thereafter. If interest is paid to an overseas investment vehicle, the overseas investment vehicle (subject to certain exceptions) must submit a report of overseas investment vehicle and a schedule of beneficial owners. The foregoing matter is discussed in more detail below.

#### ***Tax on Capital Gains***

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 Non-Residents (other than to their permanent establishments in Korea). In addition, capital gains earned by Non-Residents with or without permanent establishments in Korea from the transfer taking place outside Korea of the Notes are currently exempt from taxation by virtue of STTCL, provided that the issuance of the Notes is deemed to be an overseas issuance under the STTCL.

If the exclusion or exemption from Korean taxation referred to above were to cease to be in effect, in the absence of an applicable treaty reducing or eliminating tax on capital gains, the applicable rate of tax would be the lower of 11% (including local income tax) of the gross realization proceeds and (subject to the production of satisfactory evidence of the acquisition cost and certain direct transaction costs of the relevant Note) 22% (including local income tax) of the realized gain (i.e., the excess of the gross realization proceeds over the acquisition cost and certain direct transaction costs) made. 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 relevant Korean law for offsetting gains and losses or otherwise aggregating transactions for the purpose of computing the net gain attributable to sales of Notes issued by 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 tax under an applicable tax treaty, or upon the failure of the seller to produce satisfactory evidence of his acquisition cost and certain direct transaction costs in relation to the instruments 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 withholding agent must be paid to the competent Korean tax office. The purchaser or withholding agent must pay any withholding tax no later than the tenth day of the month following the month in which the payment for the purchase of the relevant instruments occurred. Failure to transmit the withheld tax to the Korean tax authorities in time may subject the purchaser or the withholding agent to penalties under Korean tax laws. The Korean tax authorities may attempt to collect such tax from a Non-Resident who is liable for payment of any Korean tax on gains, as a purchaser or withholding agent who is obliged to withhold such tax, through proceedings against payments due to the Non-Resident from its Korean investments and the assets or revenues of any of the Non-Resident's branch or representative offices in Korea.

#### ***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 continuously for at least 183 days immediately prior to his death and (b) all property located in Korea which passes on death (irrespective of the domicile or residence of 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 from 10% to 50% according to the value of the relevant property and the identity of the persons involved. At present, Korea has not entered into any tax treaties regarding its inheritance or gift taxes.

Under Korean inheritance and gift tax laws, bonds issued by Korean corporations are deemed located in Korea irrespective of where they are physically located or by whom they are owned. And, consequently, the Korean inheritance and gift taxes will be imposed on transfers of the Notes by inheritance or gift. Holders should consult their personal tax advisers regarding the consequences of the imposition of the Korean inheritance or gift tax.

#### ***Stamp Duty and Notes Transaction Tax***

No stamp, issue or registration duties will be payable in Korea by the Holders in connection with the issue of the Notes except for a nominal amount of stamp duty on certain documents executed in Korea which will be paid by us. No securities transaction tax will be imposed upon the transfer of the Notes.

#### ***Tax Treaties***

At the date of this offering circular, 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 under which the rate of withholding tax on interest is reduced, generally to between 5 and 16.5% (including local income tax), and the tax on capital gains is often eliminated.

Each Holder should inquire whether he is entitled to the benefit of a tax treaty with respect to any transaction involving the Notes. It is the responsibility of the party claiming the benefits of a tax treaty in respect of interest payments to file with the payer or us a certificate as to his residence. In the absence of sufficient proof, the payer or we must withhold taxes in accordance with the above discussion.

In order to claim the benefit of a tax rate reduction or tax exemption available under the applicable tax treaties, a non-resident holder should submit to the payer of such Korean source income an application (for a reduced withholding tax rate, the “application for entitlement to reduced tax rate,” and for an exemption from withholding tax, the “application for exemption” under a tax treaty along with a certificate of the non-resident holder’s tax residence issued by a competent authority of the non-resident holder’s residence country) as the beneficial owner of such Korean source income (“BO Application”). Such application should be submitted to the withholding agent prior to the payment date of the relevant income. Subject to certain exceptions, where the relevant income is paid to an overseas investment vehicle (which is not the beneficial owner of such income) (“OIV”), a beneficial owner claiming the benefit of an applicable tax treaty with respect to such income must submit its BO Application to such OIV, which must submit an OIV report and a schedule of beneficial owners to the withholding agent prior to the payment date of such income. In the case of a tax exemption application, the withholding agent is required to submit such application (together with the applicable OIV report in the case of income paid to an OIV) to the relevant district tax office by the ninth day of the month following the date of the payment of such income.

#### ***Withholding and Gross Up***

As mentioned above, interest on the Notes is exempt from any withholding or deduction on account of income tax or corporation tax pursuant to STTCL. However, in the event that the payer or we are required by law to make any withholding or deduction for or on account of any Korean taxes (as more fully described in “Terms and Conditions of the Notes – Additional Amounts”) we have agreed to pay (subject to the customary exceptions as set out in “Terms and Conditions of the Notes – Additional Amounts”) such Additional Amounts as may be necessary in order that the net amounts received by the Holder of any Note after such withholding or deduction shall equal the respective amounts which would have been received by such Holder in the absence of such withholding or deduction.

#### **U.S. Taxation**

The following summary describes certain U.S. federal income tax considerations with respect to the purchase, ownership and disposition of Notes by a U.S. Holder (as defined below) as of the date of this offering circular. The discussion below is based upon the provisions of the Internal Revenue Code of 1986, as amended (the “Code”), and regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, possibly with retroactive effect, so as to result in U.S. federal income tax consequences different from those discussed below. The summary does not purport to be a comprehensive description of all of the tax considerations that may be relevant to any particular investor, including tax considerations that arise from rules of general application to all taxpayers or to certain classes of investors or that are generally assumed to be known by investors. The discussion set forth below deals only with Notes purchased at their original issuance and issue price and held as capital assets. It does not address tax considerations applicable to investors that may be subject to special tax rules, such as dealers in securities or currencies, short-term holders of the Notes, financial institutions, tax-exempt entities, insurance companies, regulated investment companies, real estate investment trusts, persons liable for alternative minimum tax, U.S. expatriates, partnerships and other pass-through entities for U.S. federal income tax purposes and partners or other investors therein, persons holding Notes as a part of a hedging, integrated, conversion or constructive sale transaction or a straddle, traders in securities that elect to use a mark-to-market method of accounting for their securities holdings or investors whose “functional currency” is not the U.S. dollar. In addition, this discussion does not consider the effect of any applicable state, local or foreign tax laws,

the Medicare tax on net investment income, the special timing rules prescribed under section 451(b) of the Code, or any aspect of U.S. federal taxation other than income taxation (such as estate and gift tax laws).

As used herein, a “U.S. Holder” means a beneficial owner of a Note that is, for U.S. federal income tax purposes, an individual who is a citizen or resident of the United States, a corporation created or organized in or under the laws of the United States or any political subdivision thereof, or any other person that is subject to U.S. federal income tax on a net income basis in respect of its investment in the Notes.

Investors should consult their own tax advisors regarding the tax consequences of the acquisition, ownership and disposition of the Notes, including the application to their particular circumstances of the U.S. federal income tax considerations discussed below, as well as the application of U.S. state and local tax laws and non-U.S. tax laws.

### ***Payment of Stated Interest***

Payments of stated interest on a Note, including the amount of any tax withheld therefrom and any additional amounts paid in respect of such withholding, generally will be taxable to a U.S. Holder as ordinary income at the time it is paid or accrued in accordance with the U.S. Holder’s method of accounting for U.S. federal income tax purposes. It is expected, and this discussion assumes, that the Notes will be issued without original issue discount (“OID”) for U.S. federal income tax purposes. In general, however, if a series of Notes is issued with OID at or above a *de minimis* threshold, a U.S. Holder of that series of Notes will be required to include OID in gross income, as ordinary income, under a “constant-yield method” before the receipt of cash attributable to such income, regardless of the U.S. Holder’s regular method of accounting for U.S. federal income tax purposes.

Subject to generally applicable limitations and conditions, Korean interest withholding tax paid at the appropriate rate applicable to a U.S. Holder may be eligible for credit against such U.S. Holder’s U.S. federal income tax liability. (See the discussion above under “–Korean Taxation.”) These generally applicable limitations and conditions include new requirements adopted by the U.S. Internal Revenue Service (“IRS”) in 2021, and any Korean tax will need to satisfy these requirements in order to be eligible to be a creditable tax for a U.S. Holder. In the case of a U.S. holder that either (i) is eligible for, and properly elects, the benefits of the income tax treaty between the United States and the Republic of Korea (the “Treaty”), or (ii) consistently elects for tax years ending before January 1, 2024 to apply a modified version of these rules under recently issued temporary guidance and complies with specific requirements set forth in such guidance, the Korean tax on interest may be treated as meeting the new requirements and therefore as a creditable tax. In respect of tax years ending after December 31, 2023, the application of these requirements to the Korean tax on interest is uncertain, and we have not determined whether these requirements have been met, including requirements applicable to creditability under the Treaty. If the Korean interest tax is not a creditable tax for a U.S. Holder or the U.S. Holder does not elect to claim a foreign tax credit for any foreign income taxes paid or accrued in the same taxable year, the U.S. Holder may be able to deduct the Korean tax in computing such U.S. Holder’s taxable income for U.S. federal income tax purposes. Interest and additional amounts will constitute income from sources without the United States and, if the withholding tax is a creditable tax for a U.S. Holder that elects to claim foreign tax credits, generally will constitute “passive category income” for purposes of the foreign tax credit.

The availability and calculation of foreign tax credits and deductions for foreign taxes depend on a U.S. Holder’s particular circumstances and involve the application of complex rules to those circumstances. U.S. Holders should consult their own tax advisors regarding the application of these rules to their particular situations.

### ***Sale, Exchange and Retirement of Notes***

Upon the sale, exchange or retirement of a Note, a U.S. Holder generally will recognize a gain or loss equal to the difference between the amount realized on the sale, exchange or retirement (less any accrued interest, which will be taxable as such) and the U.S. Holder's tax basis in such Note. A U.S. Holder's adjusted tax basis in a Note generally will be the purchase price of that Note on the date of purchase. Gain or loss realized by a U.S. Holder on a sale or other taxable disposition of a Note generally will be capital gain or loss and will be long-term capital gain or loss if, at the time of such sale or disposition, the Notes have been held for more than one year. Certain non-corporate U.S. Holders (including individuals) may be eligible for preferential rates of taxation in respect of long-term capital gains. The deductibility of capital losses is subject to limitations.

A U.S. Holder generally will not be entitled to credit any Korean tax imposed on the sale or other disposition of the Notes against such U.S. Holder's U.S. federal income tax liability, except in the case of either (i) a U.S. Holder that is eligible for, and properly elects to claim, the benefits of the Treaty, or (ii) a U.S. Holder that consistently elects to apply a modified version of the U.S. foreign tax credit rules that is permitted under recently issued temporary guidance and that is currently available only for tax years ending before January 1, 2024, subject to various requirements. Additionally, capital gain or loss recognized by a U.S. Holder on the sale, exchange or retirement of the Notes generally will be U.S. source gain or loss for U.S. foreign tax credit purposes. Consequently, even if the withholding tax qualifies as a creditable tax, a U.S. Holder may not be able to credit the tax against its U.S. federal income tax liability unless such credit can be applied (subject to generally applicable conditions and limitations) against tax due on other income treated as derived from foreign sources. If the Korean tax is not a creditable tax or is not claimed as a credit by the U.S. Holder pursuant to the Treaty, the tax would reduce the amount realized on the sale, exchange or retirement of the Notes even if the U.S. Holder has elected to claim a foreign tax credit for other taxes in the same year. U.S. Holders should consult their own tax advisors regarding the application of the foreign tax credit rules to a sale, exchange or retirement of the Notes and any Korean tax imposed on such sale, exchange or retirement.

### ***Foreign Financial Assets Reporting***

Certain U.S. Holders that own "specified foreign financial assets" with an aggregate value in excess of U.S.\$50,000 on the last day of the taxable year or U.S.\$75,000 at any time during the taxable year are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. "Specified foreign financial assets" include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer (which would include the Notes) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. U.S. Holders that fail to report the required information could be subject to substantial penalties. In addition, the statute of limitations for assessment of tax would be suspended, in whole or part. Prospective investors should consult their own tax advisors concerning the application of these rules to their investment in the Notes, including the application of the rules to their particular circumstances.

### ***Information Reporting and Backup Withholding***

Payments in respect of the Notes (including the proceeds of a disposition of a Note) that are paid within the United States or through certain U.S.-related financial intermediaries are generally subject to information reporting, unless the Holder is an exempt recipient. Payments to a U.S. Holder that is not an exempt recipient may also be subject to backup withholding, unless the U.S. Holder provides an accurate taxpayer identification number and certifies that it has not lost its exemption from backup withholding. A Holder that is a foreign corporation or a non-resident alien individual may be required to comply with certification and identification procedures in order to establish an exemption from information reporting and backup withholding. The amount of any backup withholding collected from a payment to a Holder will be allowed as a credit against the Holder's U.S. federal income tax liability

and may entitle the Holder to a refund, provided that certain required information is timely furnished to the IRS. Holders should consult their tax advisors about these rules and any other reporting obligations that may apply to the ownership or disposition of Notes.

## PLAN OF DISTRIBUTION

Under the terms and conditions contained in a purchase agreement dated September 18, 2023 (the “Purchase Agreement”), we have agreed to sell to Citigroup Global Markets Inc., The Korea Development Bank, Merrill Lynch International, Morgan Stanley & Co. International plc and Standard Chartered Bank (together, the “Initial Purchasers”), the following principal amounts of the 2026 Notes and the 2028 Notes.

<u>Initial Purchasers</u>	<u>Principal Amount of the 2026 Notes</u>	<u>Principal Amount of the 2028 Notes</u>
Citigroup Global Markets Inc. . . . .	U.S.\$ 80,000,000	U.S.\$ 120,000,000
The Korea Development Bank . . . . .	80,000,000	120,000,000
Merrill Lynch International . . . . .	80,000,000	120,000,000
Morgan Stanley & Co. International plc . . . . .	80,000,000	120,000,000
Standard Chartered Bank . . . . .	80,000,000	120,000,000
Total . . . . .	<u>U.S.\$ 400,000,000</u>	<u>U.S.\$ 600,000,000</u>

The Purchase Agreement provides that the Initial Purchasers are obligated to purchase all of the Notes, if any are purchased. Each of the Initial Purchasers proposes to offer the Notes initially at the offering price on the cover page of this offering circular. After the initial offering, the offering price may be changed.

We have agreed to indemnify each of the Initial Purchasers against certain liabilities, including liabilities under the Securities Act, or to contribute to the amount the Initial Purchasers may be required to make in respect of those liabilities.

The Initial Purchasers are offering the Notes, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the Notes, and other conditions contained in the Purchase Agreement, such as the receipt by the Initial Purchasers of officer’s certificates and legal opinions. The Initial Purchasers reserve the right to withdraw, cancel or modify offers to investors and to reject orders in whole or in part.

If a jurisdiction requires that the Offering be made by a licensed broker or dealer and any Initial Purchaser or any affiliate of an Initial Purchaser is a licensed broker or dealer in that jurisdiction, the offering of any of the Notes shall be deemed to be made by such Initial Purchaser or such affiliate on behalf of us in such jurisdiction.

### **New Issue of Notes**

The Notes are a new issue of securities with no established trading market. The Initial Purchasers have advised that they presently intend to make a market in the Notes after completion of the offering. However, they are under no obligation to do so and may discontinue any market-making activities at any time without any notice. We cannot assure the liquidity of the trading market for the Notes. If an active trading market for the Notes does not develop, the market price and liquidity of the Notes may be adversely affected. If the Notes are traded, they may trade at a discount from their initial offering price, depending on prevailing interest rates, the market for similar securities, our operating performance and financial condition, general economic conditions and other factors.

### **Settlement**

Delivery of the Notes is expected on or about September 25, 2023.

### **No Sales of Similar Securities**

For a period of 90 days after the date hereof, we will not, without the prior written consent of the Initial Purchasers, issue, offer, sell or contract to sell, or announce the offering of, any non-Won denominated debt securities issued or guaranteed by us. We will not at any time offer, sell, contract to

sell, pledge or otherwise dispose of, directly or indirectly, any securities under circumstances where such offer, sale, pledge, contract or disposition would cause the exemption afforded by Section 4(2) of the Securities Act or the safe harbor of Regulation S to cease to be applicable to the offer and sale of the Notes.

### **Short Positions**

In connection with the offering, the Initial Purchasers may purchase and sell the Notes in the open market. These transactions may include short sales and purchases on the open market to cover positions created by short sales. Short sales involve the sale by the Initial Purchasers of a greater principal amount of Notes than they are required to purchase in the offering. The Initial Purchasers must close out any short position by purchasing Notes in the open market. A short position is more likely to be created if the Initial Purchasers are concerned that there may be downward pressure on the price of the Notes in the open market after pricing that could adversely affect investors who purchase Notes in the offering.

Similar to other purchase transactions, the Initial Purchasers' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of the Notes or preventing or retarding a decline in the market price of the Notes. As a result, the price of the Notes may be higher than the price that might otherwise exist in the open market.

None of us and the Initial Purchasers makes any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the Notes. In addition, none of us and the Initial Purchasers makes any representation that the Initial Purchasers will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

### **Important Notice to CMIs (including private banks)**

This notice to CMIs (including private banks) is a summary of certain obligations the SFC Code imposes on CMIs, which require the attention and cooperation of other CMIs (including private banks). Certain CMIs may also be acting as OCs for this offering and are subject to additional requirements under the SFC Code.

Prospective investors who are the directors, employees or major shareholders of the Company, a CMI or its group companies would be considered under the SFC Code as having an Association with the Company, the CMI or the relevant group company. CMIs should specifically disclose whether their investor clients have any Association when submitting orders for the Notes. In addition, private banks should take all reasonable steps to identify whether their investor clients may have any Associations with the Company or any CMI (including its group companies) and inform the Initial Purchasers accordingly.

CMIs are informed that the marketing and investor targeting strategy for this offering includes institutional investors, sovereign wealth funds, pension funds, hedge funds, family offices and high net worth individuals, in each case, subject to the selling restrictions and any UK MiFIR product governance language set out elsewhere in this offering circular.

CMIs should ensure that orders placed are bona fide, are not inflated and do not constitute duplicated orders (i.e. two or more corresponding or identical orders placed via two or more CMIs). CMIs should enquire with their investor clients regarding any orders which appear unusual or irregular. CMIs should disclose the identities of all investors when submitting orders for the Notes (except for omnibus orders where underlying investor information may need to be provided to any OCs when submitting orders). Failure to provide underlying investor information for omnibus orders, where required to do so, may result in that order being rejected. CMIs should not place "X-orders" into the order book.

CMI should segregate and clearly identify their own proprietary orders (and those of their group companies, including private banks as the case may be) in the order book and book messages.

CMI (including private banks) should not offer any rebates to prospective investors or pass on any rebates provided by the Company. In addition, CMI (including private banks) should not enter into arrangements which may result in prospective investors paying different prices for the Notes.

The SFC Code requires that a CMI disclose complete and accurate information in a timely manner on the status of the order book and other relevant information it receives to targeted investors for them to make an informed decision. In order to do this, those Initial Purchasers in control of the order book should consider disclosing order book updates to all CMIs.

When placing an order for the Notes, private banks should disclose, at the same time, if such order is placed other than on a “principal” basis (whereby it is deploying its own balance sheet for onward selling to investors). Private banks who do not provide such disclosure are hereby deemed to be placing their order on such a “principal” basis. Otherwise, such order may be considered to be an omnibus order pursuant to the SFC Code. Private banks should be aware that placing an order on a “principal” basis may require the relevant affiliated Joint Initial Purchaser(s) (if any) to categorize it as a proprietary order and apply the “proprietary orders” requirements of the SFC Code to such order.

In relation to omnibus orders, when submitting such orders, CMIs (including private banks) that are subject to the SFC Code should disclose underlying investor information in respect of each order constituting the relevant omnibus order (failure to provide such information may result in that order being rejected). Underlying investor information in relation to omnibus orders should consist of:

- The name of each underlying investor;
- A unique identification number for each investor;
- Whether an underlying investor has any “Associations” (as used in the SFC Code);
- Whether any underlying investor order is a “Proprietary Order” (as used in the SFC Code);
- Whether any underlying investor order is a duplicate order.

Underlying investor information in relation to omnibus order should be sent to: [bofa\\_dcm\\_syndicate\\_pb\\_orders@bofa.com](mailto:bofa_dcm_syndicate_pb_orders@bofa.com), [dg.koreagcm@bofa.com](mailto:dg.koreagcm@bofa.com), [DCM.Omnibus@citi.com](mailto:DCM.Omnibus@citi.com), [kdbdcm@kdb.co.kr](mailto:kdbdcm@kdb.co.kr), [omnibus\\_debt@morganstanley.com](mailto:omnibus_debt@morganstanley.com), [synhk@sc.com](mailto:synhk@sc.com).

To the extent information being disclosed by CMIs and investors is personal and/or confidential in nature, CMIs (including private banks) agree and warrant: (A) to take appropriate steps to safeguard the transmission of such information to any OCs; and (B) that they have obtained the necessary consents from the underlying investors to disclose such information to any OCs. By submitting an order and providing such information to any OCs, each CMI (including private banks) further warrants that they and the underlying investors have understood and consented to the collection, disclosure, use and transfer of such information by any OCs and/or any other third parties as may be required by the SFC Code, including to the Company, relevant regulators and/or any other third parties as may be required by the SFC Code, for the purpose of complying with the SFC Code, during the bookbuilding process for this offering. CMIs that receive such underlying investor information are reminded that such information should be used only for submitting orders in this offering. The Initial Purchasers may be asked to demonstrate compliance with their obligations under the SFC Code, and may request other CMIs (including private banks) to provide evidence showing compliance with the obligations above (in particular, that the necessary consents have been obtained). In such event, other CMIs (including private banks) are required to provide the relevant Initial Purchaser with such evidence within the timeline requested.

## **Selling Restrictions**

### **General**

No action has been or will be taken in any jurisdiction that would permit a public offering of the Notes, or the possession, circulation or distribution of this offering circular or any amendment or supplement to this offering circular, in any country or jurisdiction where action for any such purposes is required. Accordingly, the Notes may not be offered or sold, directly or indirectly, and neither this offering circular nor any other offering material or advertisements in connection with the Notes may be distributed or published, in or from any country or jurisdiction except under circumstances that will result in compliance with applicable laws and regulations.

### **United States**

The Notes have not been and will not be registered under the Securities Act and, subject to certain exceptions, may not be offered or sold within the United States.

The Notes are being offered and sold outside of the United States in reliance on Regulation S. The Purchase Agreement provides that the Initial Purchasers may directly or through their respective U.S. broker-dealer affiliates arrange for the offer and resale of the Notes within the United States only to qualified institutional buyers in reliance on Rule 144A.

In addition, until 40 days after the commencement of the Offering, an offer or sale of Notes within the United States by any dealer (whether or not participating in the offering) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with Rule 144A.

### **United Kingdom**

Each of the Initial Purchasers has severally represented and agreed that:

- a) 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 Financial Services and Markets Act of 2000 (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 us; and
- b) 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.

### **Korea**

Each Initial Purchaser has represented and agreed that the Notes have not been and will not be offered, delivered or sold directly or indirectly in Korea or to any resident of Korea or to others for re-offering or resale directly or indirectly in Korea or to any resident of Korea (as defined in the Foreign Exchange Transactions Act of Korea and the regulations thereunder) except as otherwise permitted under applicable Korean laws and regulations.

In addition, each Initial Purchaser has confirmed that during the first year after the issuance of the Notes, the Notes may not be transferred to any resident of Korea other than a “qualified institutional buyer” (a “Korean QIB”, as defined in the Regulation on Securities Issuance, Public Disclosure, Etc. of Korea) who is registered with the Korea Financial Investment Association for Korean QIB bond trading. Furthermore, the Notes acquired by all Korean QIBs at the time of issuance must be no more than 20% of the aggregate principal amount of the Notes.

Each Initial Purchaser has undertaken to use commercially reasonable best measures as an Initial Purchaser in the ordinary course of its business so that any securities dealer to which it sells the Notes confirms that it is purchasing such Notes as principal and agrees with such Initial Purchaser that it will comply with the restrictions described above.

## **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 Initial Purchaser has represented and agreed 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.

## **Hong Kong**

Each Initial Purchaser has represented and agreed 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 (i) 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 (ii) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) 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 Initial Purchaser has acknowledged that this offering circular has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under the SFA. Each Initial Purchaser represents, warrants and agrees 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, this offering circular and 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
- 5) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018 of Singapore.

### **Republic of Italy**

The Offering 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 this offering circular or of any other document relating to any Notes be distributed in Italy, except, in accordance with any Italian securities, tax and other applicable laws and regulations.

Each Initial Purchaser has represented and agreed that it has not offered, sold or delivered, and will not offer, sell or deliver any Notes or distribute any copy of this offering circular 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, paragraph 1, 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 this offering circular or any other document relating to the Notes in 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 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.

## **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 Company 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.

## **Canada**

The Notes may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the Notes must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this offering circular (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (“NI 33-105”), the Initial Purchasers are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

## **Other Relationships**

Some of the Initial Purchasers and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

The Initial Purchasers 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. The Initial Purchasers 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 Notes and/or our other securities at the same time as the offer and sale 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 Notes to which this offering circular relates (notwithstanding that such selected counterparties may also be purchasers of Notes). We have been advised by the Initial Purchasers that they may offer and sell Notes to or through any of their respective affiliates and any such affiliate may offer and sell Notes purchased by it to or through any Initial Purchaser.

In addition, in the ordinary course of their business activities, the Initial Purchasers and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours and our affiliates. Certain of the Initial Purchasers or their affiliates that have a lending relationship with us routinely hedge their credit exposure to us consistent with their customary risk management policies. Typically, such Initial Purchasers and their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities, including potentially the Notes. Any such short positions could adversely affect future trading prices of the Notes. The Initial Purchasers and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

## TRANSFER RESTRICTIONS

Because of the following restrictions, investors are advised to consult legal counsel prior to making any offer, resale, pledge or other transfer of the Notes offered pursuant to this offering circular.

### Korea

Each purchaser of the Notes, by accepting delivery of this offering circular, will be deemed to have acknowledged, represented and agreed as follows:

THE NOTES HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT OF KOREA. ACCORDINGLY, THE NOTES MAY NOT BE OFFERED, SOLD OR DELIVERED, DIRECTLY OR INDIRECTLY, IN 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) 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.

IN ADDITION, DURING THE FIRST YEAR AFTER THE ISSUANCE OF THE NOTES, THE NOTES MAY NOT BE TRANSFERRED TO ANY RESIDENT OF KOREA OTHER THAN A “QUALIFIED INSTITUTIONAL BUYER” (A “KOREAN QIB”, AS DEFINED IN THE REGULATION ON SECURITIES ISSUANCE, PUBLIC DISCLOSURE, ETC. OF KOREA) WHO IS REGISTERED WITH THE KOREA FINANCIAL INVESTMENT ASSOCIATION AS A KOREAN QIB, PROVIDED THAT THE AMOUNT OF THE NOTES ACQUIRED BY SUCH KOREAN QIBS IN THE PRIMARY MARKET IS LIMITED TO NO MORE THAN 20 PERCENT OF THE AGGREGATE ISSUE AMOUNT OF THE NOTES.

### United States

The Notes have not been and will not be registered under the Securities Act or the securities laws of any state of the United States or the securities laws of any other jurisdiction. The Notes may not be offered or sold within the United States, except in reliance on Rule 144A to QIBs. The Notes may also be offered and sold in offshore transactions in reliance on Regulation S.

Each purchaser of the Notes hereunder will be deemed to have represented and agreed as follows (terms used in this paragraph that are defined in Rule 144A or in Regulations S under the Securities Act are used in this offering circular as defined in the Securities Act):

1. it is purchasing the Notes for its own account or an account with respect to which it exercises sole investment discretion, and it and any such account (i) is a QIB, and is aware that the sale to it is being made in reliance on Rule 144A or (ii) is purchasing the Notes in an offshore transaction pursuant to Regulation S;
2. it acknowledges that the Notes have not been and will not be registered under the Securities Act or with any securities regulatory authority of any jurisdiction and may not be offered or sold within the United States except as set forth below;
3. it understands and agrees that if in the future it decides to sell, pledge or otherwise transfer any Notes or any beneficial interest in any Notes, such Notes may be offered, resold, pledged or transferred only (A)(i) to us, (ii) to a person whom the seller reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A, (iii) in an offshore transaction meeting the requirements of Rule 903 or 904 of Regulation S under the Securities Act, (iv) pursuant to an exemption from registration under the Securities Act provided by Rule 144 under the Securities Act (if available) or (v) pursuant to another exemption from the

Securities Act, provided that, as a condition to the registration of the transfer thereof, the Registrar or we may require the delivery of any documents, including an opinion of counsel that it, in its sole discretion, may deem necessary or appropriate to evidence compliance with such exemption, or (B) pursuant to an effective registration statement under the Securities Act, and, in each of such cases in accordance with any applicable securities laws of any state of the United States;

4. it agrees to, and each subsequent holder is required to, notify any purchaser of the Notes from it of the resale restrictions referred to in clause (3)(A) above, if then applicable;
5. it understands and agrees that Notes initially offered in the United States to QIBs will be represented by global notes (the "Rule 144A Global Notes") and that Notes initially offered outside the United States in reliance on Regulation S will be represented by other global notes (the "Regulation S Global Notes" and, together with the Rule 144A Global Notes, the "Global Notes");
6. it understands that the Rule 144A Global Notes will, until the expiration of the applicable holding period with respect to the Notes set forth in Rule 144 of the Securities Act, unless otherwise agreed by us, bear a legend substantially to the following effect:

"THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"). THE HOLDER HEREOF, BY PURCHASING THIS SECURITY, AGREES FOR THE BENEFIT OF LG ENERGY SOLUTION, LTD. (THE "COMPANY") THAT THIS SECURITY MAY BE OFFERED, RESOLD, PLEDGED OR OTHERWISE TRANSFERRED ONLY (A)(i) TO THE COMPANY, (ii) TO A PERSON WHOM THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER, AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT, IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A UNDER THE SECURITIES ACT, (iii) IN AN OFFSHORE TRANSACTION MEETING THE REQUIREMENTS OF RULE 903 OR 904 OF REGULATION S UNDER THE SECURITIES ACT, (iv) PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (v) PURSUANT TO ANOTHER EXEMPTION FROM THE SECURITIES ACT, PROVIDED THAT, AS A CONDITION TO THE REGISTRATION OF THE TRANSFER THEREOF, THE COMPANY OR THE FISCAL AGENT MAY REQUIRE THE DELIVERY OF ANY DOCUMENTS, INCLUDING AN OPINION OF COUNSEL THAT IT, IN ITS SOLE DISCRETION, MAY DEEM NECESSARY OR APPROPRIATE TO EVIDENCE COMPLIANCE WITH SUCH EXEMPTION, OR (B) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, AND, IN EACH OF SUCH CASES IN ACCORDANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. THE HOLDER WILL, AND EACH SUBSEQUENT HOLDER IS REQUIRED TO, NOTIFY ANY SUBSEQUENT PURCHASER OF THE SECURITY FROM IT OF THE RESALE RESTRICTIONS REFERRED TO IN (A) ABOVE."

7. it understands that, unless otherwise agreed by us, the Regulation S Global Notes will bear a legend substantially to the following effect:

"THIS SECURITY (OR ITS PREDECESSOR) WAS ORIGINALLY ISSUED IN A TRANSACTION EXEMPT FROM REGISTRATION UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND MAY NOT BE TRANSFERRED IN THE UNITED STATES EXCEPT PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT

AND ALL APPLICABLE STATE SECURITIES LAWS. TERMS USED ABOVE HAVE THE MEANINGS GIVEN TO THEM IN REGULATION S UNDER THE SECURITIES ACT.”

8. it acknowledges that prior to any proposed transfer of any Notes in certificated form or of beneficial interests in the Global Notes (other than pursuant to an effective registration statement), the holder of the Notes or the holder of beneficial interests in the Global Notes, as the case may be, may be required to provide certificates and other documentation relating to the manner of such transfer and submit such certifications and other documentation as provided in the Notes and the Fiscal Agency Agreement; and
9. it acknowledges that we, the Initial Purchasers, the Fiscal Agent and others will rely upon the truth and accuracy of the foregoing acknowledgments, representations and agreements and agrees that if any of such acknowledgments, representations or warranties deemed to have been made by virtue of its purchase of the Notes is no longer accurate, it shall promptly notify us; 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 acknowledgments, representations and agreement on behalf of each such account.

Each purchaser and subsequent transferee acknowledges and agrees that they will be deemed by such purchase or holding of the Notes (or any beneficial interest therein) that either (i) no portion of the assets used by such purchaser or transferee to acquire or hold the Notes or any beneficial interest therein constitutes assets of any employee benefit plan subject to Title I of the United States Employee Retirement Income Security Act of 1974, as amended (“ERISA”), plan, individual retirement account or other arrangement subject to Section 4975 of the United States Internal Revenue Code of 1986, as amended (the “Code”) or provisions under any other federal, state, local, non-U.S. or other laws or regulations that are similar to such provisions of ERISA or the Code (collectively, “Similar Laws”) or any entity whose underlying assets are considered to include “plan assets” of any such employee benefit plan, plan, account or arrangement or (ii) the purchase and holding of the Notes or any beneficial 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 a similar violation of any applicable Similar Laws.

## **Singapore**

This offering circular has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under the SFA. Accordingly, this offering circular and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes may not be circulated or distributed, nor may the Notes be offered or sold, or be made the subject of an invitation for subscription or purchase, 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 initially subscribed or purchased by (i) an institutional investor under Section 274 of the SFA, or (ii) 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, the Notes may only be sold or transferred: (a) at any time, to an institutional investor under Section 274 of the SFA; (b) at any time, to a relevant person defined in

Section 275(2) of the SFA or to any person pursuant to an offer referred to in Section 275(1A) of the SFA; or (c) 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:

1. 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
2. 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
5. as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018 of Singapore.

## **LEGAL MATTERS**

Certain legal matters relating to the Offering will be passed upon for us by Cleary Gottlieb Steen & Hamilton LLP, our special U.S. counsel, and for the Initial Purchasers by Linklaters LLP, their special U.S. counsel. Certain legal matters relating to the Offering will be passed upon for us by Lee & Ko, our Korean counsel. Cleary Gottlieb Steen & Hamilton LLP and Linklaters LLP may rely as to all matters of Korean law on the opinion of Lee & Ko. Lee & Ko may rely as to all matters of New York law on the opinion of Cleary Gottlieb Steen & Hamilton LLP.

## **INDEPENDENT AUDITORS**

Our annual consolidated financial statements as of and for the year ended December 31, 2022 included in this offering circular, have been audited by Deloitte Anjin LLC, independent auditors, as stated in their report appearing herein. Our annual consolidated financial statements as of and for the year ended December 31, 2021 included in this offering circular, have been audited by Ernst & Young Han Young, independent auditors, as stated in their report (which contains an emphasis of matter paragraph that describes our settlement with SK on) appearing herein.

With respect to our unaudited interim condensed consolidated financial statements as of June 30, 2023 and for the six months ended June 30, 2023 and 2022 included in this offering circular, Deloitte Anjin LLC reported that they have applied limited procedures in accordance with the review standards for interim financial statements in the Republic of Korea for a review of such information. In addition, their separate report dated August 11, 2023 appearing herein states that they did not audit and they do not express an opinion on such interim financial information. Accordingly, the degree of reliance on their report on such information should be restricted in light of the limited nature of the review procedures applied.

## **AVAILABLE INFORMATION**

To permit compliance with Rule 144A under the Securities Act in connection with sales of the Notes, we will be required to furnish, upon request of a holder of Notes, to such holder of Notes and any prospective investor designated by such holder of Notes, the information required to be delivered under Rule 144A(d)(4) under the Securities Act unless at the time of the request we are a reporting company under Section 13 or Section 15(d) of the Exchange Act, or included in the list of foreign private issuers that claim exemption from the registration requirements of Section 12(g) of the Exchange Act (and therefore are required to publish on our website, in English, certain information pursuant to Rule 12g3-2(b) under the Exchange Act). Any such request should be directed to LG Energy Solution, Ltd., Attention: Finance Team, 61st Floor, Parc One Tower 1, 108 Yeoui-daero, Yeongdeungpo-gu, Seoul 07335, Korea (telephone: +82-2-3773-3451).

You should rely only upon the information provided in this offering circular. We have not authorized anyone to provide you with different information. You should not assume that the information in this offering circular is accurate as of any date other than the date of this offering circular.

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## Report on Review of Interim Condensed Consolidated Financial Statements

### English Translation of Independent Auditor's Review Report Originally Issued in Korean on August 11, 2023

To the Shareholders and the Board of Directors of  
LG Energy Solution, Ltd.:

#### Reviewed financial statements

We have reviewed the accompanying interim condensed consolidated financial statements of LG Energy Solution, Ltd. and its subsidiaries (the "Group"). These interim condensed consolidated financial statements consist of the interim condensed consolidated statement of financial position as of June 30, 2023, and the related interim condensed consolidated statements of profit or loss, interim condensed consolidated statements of comprehensive income for the three-month and six-month periods ended June 30, 2023 and 2022, and the interim condensed consolidated statements of changes in equity and interim condensed consolidated statements of cash flows for the six-month periods ended June 30, 2023 and 2022, all expressed in Korean won, and a summary of significant accounting policies and other explanatory information.

#### Management's responsibility for the interim condensed consolidated financial statements

Management is responsible for the preparation and presentation of these interim condensed consolidated financial statements in accordance with Korean International Financial Reporting Standard ("K-IFRS") 1034 *Interim Financial Reporting*, and for such internal control as management determines is necessary to enable the preparation of interim condensed consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's responsibility

Our responsibility is to express a conclusion on these interim condensed consolidated financial statements based on our review.

We conducted our review in accordance with the review standards for interim financial statements in the Republic of Korea. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Korean Standards on Auditing ("KSAs") and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

#### Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the accompanying interim condensed consolidated financial statements are not prepared, in all material respects, in accordance with K-IFRS 1034 *Interim Financial Reporting*.

# Deloitte.

## Other matters

We have audited the consolidated statement of financial position of the Group as of December 31, 2022, and the related consolidated statement of profit or loss, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended in accordance with KSAs. We expressed an unqualified opinion on those consolidated financial statements, not presented herein, in our audit report dated March 8, 2023.

The accompanying consolidated statement of financial position as of December 31, 2022, presented for comparative purposes, is not different, in all material respects, from the above audited consolidated statement of financial position.

*Deloitte idnjin LLC*

August 11, 2023

This review report is effective as of August 11, 2023, the independent auditor's review report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the independent auditor's review report date to the time this review report is used. Such events and circumstances could significantly affect the accompanying interim condensed consolidated financial statements and may result in modifications to this review report.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Interim condensed consolidated statements of financial position**  
**As of June 30, 2023, and December 31, 2022**

(Korean won in millions)

	Notes	June 30, 2023	December 31, 2022
<b>Assets</b>			
<b>Current assets</b>			
Cash and cash equivalents	3,5,6	₩ 4,860,206	₩ 5,937,967
Trade receivables	3,5,7,29	5,357,563	4,771,846
Other receivables	3,5,7,29	528,142	462,188
Other current financial assets	3,5,8	862	9,167
Prepaid income taxes		33,493	46,205
Other current assets	13	643,825	581,267
Inventories	9	7,221,389	6,995,629
		<u>18,645,480</u>	<u>18,804,269</u>
<b>Non-current assets</b>			
Trade receivables	3,5,7	131,998	120,698
Other receivables	3,5,7,29	376,410	119,058
Other non-current financial assets	3,5,8	536,407	408,551
Investments in associates and joint ventures	10,31	225,886	203,696
Deferred tax assets	27	2,200,104	2,100,492
Property, plant and equipment	11,31	19,005,225	15,331,047
Intangible assets	12,31	703,112	642,090
Investment properties	31,33	212,577	213,042
Other non-current assets	13,16	357,454	356,502
		<u>23,749,173</u>	<u>19,495,176</u>
<b>Total assets</b>		<u>₩ 42,394,653</u>	<u>₩ 38,299,445</u>
<b>Liabilities</b>			
<b>Current liabilities</b>			
Trade payables	3,5,29	₩ 4,397,906	₩ 3,841,766
Other payables	3,5,29	2,545,635	2,882,030
Borrowings	3,5,11,14,30	2,705,981	2,866,701
Provisions	15	991,871	976,949
Other current financial liabilities	3,5,8	6,021	3,923
Income tax payables		217,038	173,120
Other current liabilities	17,32	440,864	700,434
		<u>11,305,316</u>	<u>11,444,923</u>
<b>Non-current liabilities</b>			
Other payables	3,5,29	78,689	36,606
Borrowings	3,5,11,14,30	6,634,608	5,242,552
Other non-current financial liabilities	3,5,8	803	742
Provisions	15	775,459	518,781
Net defined benefit liabilities	16	390	499
Deferred tax liabilities	27	91,441	108,350
Other non-current liabilities	17,32	379,230	353,230
		<u>7,960,620</u>	<u>6,260,760</u>
<b>Total liabilities</b>		<u>19,265,936</u>	<u>17,705,683</u>
<b>Equity attributable to owners of the Parent Company</b>			
Share capital	19	117,000	117,000
Capital surplus	19	17,164,627	17,164,627
Accumulated other comprehensive income		665,190	296,070
Retained earnings	20	2,088,801	1,154,518
		<u>20,035,618</u>	<u>18,732,215</u>
<b>Non-controlling interest</b>	1	3,093,099	1,861,547
<b>Total equity</b>		<u>23,128,717</u>	<u>20,593,762</u>
<b>Total liabilities and equity</b>		<u>₩ 42,394,653</u>	<u>₩ 38,299,445</u>

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Interim condensed consolidated statements of profit or loss**  
**For the three-month and six-month periods ended June 30, 2023 and 2022**

(Korean won in millions)

	Notes	June 30, 2023		June 30, 2022	
		Three months	Six months	Three months	Six months
<b>Revenue</b>	21,29,31	₩ 8,773,487	₩ 17,520,604	₩ 5,070,561	₩ 9,412,909
Cost of sales	21,22,29	7,439,411	14,892,318	4,248,734	7,815,976
<b>Gross profit</b>		1,334,076	2,628,286	821,827	1,596,933
Other operating income	21,31	110,916	211,210	-	-
Selling and administrative expenses	21,22,29	984,393	1,745,731	626,219	1,142,472
<b>Operating profit</b>	21,31	460,599	1,093,765	195,608	454,461
Finance income	5,24	353,190	642,226	154,790	262,607
Finance costs	5,24	217,515	482,794	172,796	308,416
Share of loss of associates and joint ventures	10	(8,432)	(18,292)	(8,763)	(16,880)
Other non-operating income	25	384,274	724,266	287,218	453,191
Other non-operating expenses	26	326,239	602,104	327,306	456,522
<b>Profit before income tax expense</b>		645,877	1,357,067	128,751	388,441
<b>Income tax expense</b>	27	180,736	329,940	38,825	71,893
<b>Profit for the period</b>		₩ 465,141	₩ 1,027,127	₩ 89,926	₩ 316,548
<b>Profit (loss) for the period attributable to:</b>					
Owners of the Parent Company		₩ 432,443	₩ 933,038	₩ 94,160	₩ 320,783
Non-controlling interests	1	32,698	94,089	(4,234)	(4,235)
<b>Earnings per share attributable to the equity holders of the Parent Company (in Korean won)</b>	28				
Basic or diluted earnings per share		1,848	3,987	402	1,394

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Interim condensed consolidated statements of comprehensive income**  
**For the three-month and six-month periods ended June 30, 2023 and 2022**

(Korean won in millions)

	Notes	June 30, 2023		June 30, 2022	
		Three months	Six months	Three months	Six months
<b>Profit for the period</b>		₩ 465,141	₩ 1,027,127	₩ 89,926	₩ 316,548
<b>Other comprehensive income:</b>					
Items that will not be subsequently reclassified to profit or loss:					
Remeasurements of net defined benefit liabilities	16	912	1,691	(1,646)	(1,885)
Gain(loss) on valuation of financial assets at FVOCI	5	(8,243)	2,095	10,345	13,487
Income tax effect of other comprehensive income		1,899	(1,110)	(3,691)	(4,799)
		(5,432)	2,676	5,008	6,803
Items that may be subsequently reclassified to profit or loss:					
Exchange differences on translation of foreign operations		(25,168)	446,020	221,581	335,461
Loss on cash flow hedge	5	(8,248)	(15,475)	(76,476)	(17,404)
Share of other comprehensive income of associates and joint ventures		1,564	8,467	15,046	20,004
Income tax effect of other comprehensive income		6,556	11,150	3,791	(35,515)
		(25,296)	450,162	163,942	302,546
<b>Other comprehensive income (loss) for the period, net of tax</b>		<u>(30,728)</u>	<u>452,838</u>	<u>168,950</u>	<u>309,349</u>
<b>Total comprehensive income for the period, net of tax</b>		<u>₩ 434,413</u>	<u>₩ 1,479,965</u>	<u>₩ 258,876</u>	<u>₩ 625,897</u>
<b>Total comprehensive income for the period attributable to:</b>					
Owners of the Parent Company		₩ 387,318	₩ 1,303,402	₩ 182,384	₩ 529,785
Non-controlling interest		47,095	176,563	76,492	96,112

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Interim condensed consolidated statements of changes in equity**  
**For the six-month periods ended June 30, 2023 and 2022**

(Korean won in millions)

	Notes	Attributable to the equity holders of the Parent Company						Total
		Share capital	Capital surplus	Accumulated other comprehensive income (loss)	Retained earnings (accumulated deficit)	Subtotal	Non-controlling interests	
<b>As of January 1, 2022</b>		₩ 100,000	₩ 7,122,437	₩ 406,092	₩ 337,587	₩ 7,966,116	₩ 776,257	₩ 8,742,373
Comprehensive income for the period:								
Profit for the period		-	-	-	320,783	320,783	(4,235)	316,548
Remeasurements of net defined benefit liabilities	16	-	-	-	(1,366)	(1,366)	-	(1,366)
Exchange differences on translation of foreign operations		-	-	196,616	-	196,616	100,345	296,961
Gain on valuation of financial assets at FVOCI	5	-	-	8,169	-	8,169	-	8,169
Loss on cash flow hedge	5	-	-	(14,419)	-	(14,419)	-	(14,419)
Equity adjustments in equity method	10	-	-	20,004	-	20,004	-	20,004
<b>Total comprehensive income for the period</b>		-	-	210,370	319,417	529,787	96,110	625,897
<b>Transactions with owners of the Parent Company recognized directly in equity:</b>								
Capital increase		17,000	10,079,370	-	-	10,096,370	474,946	10,571,316
Dividend		-	(37,180)	-	-	(37,180)	-	(37,180)
<b>As of June 30, 2022</b>		17,000	10,042,190	-	-	10,059,190	474,946	10,534,136
<b>As of January 1, 2023</b>		₩ 117,000	₩ 17,164,627	₩ 616,462	₩ 657,004	₩ 18,555,093	₩ 1,347,313	₩ 19,902,406
Comprehensive income for the period:								
Profit for the period		-	-	-	933,038	933,038	94,089	1,027,127
Remeasurements of net defined benefit liabilities	16	-	-	-	1,245	1,245	-	1,245
Exchange differences on translation of foreign operations		-	-	370,825	-	370,825	82,473	453,298
Gain on valuation of financial assets at FVOCI	5	-	-	1,431	-	1,431	-	1,431
Loss on cash flow hedge	5	-	-	(11,603)	-	(11,603)	-	(11,603)
Equity adjustments in equity method	10	-	-	8,467	-	8,467	-	8,467
<b>Total comprehensive income for the period</b>		-	-	369,120	934,283	1,303,403	176,562	1,479,965
<b>Transactions with owners of the Parent Company recognized directly in equity:</b>								
Capital increase		-	-	-	-	-	1,054,990	1,054,990
<b>As of June 30, 2023</b>		₩ 117,000	₩ 17,164,627	₩ 665,190	₩ 2,088,801	₩ 20,035,618	₩ 3,093,099	₩ 23,128,717

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Interim condensed consolidated statements of cash flows**  
**For the six-month periods ended June 30, 2023 and 2022**

(Korean won in millions)

	<u>Notes</u>	<u>June 30, 2023</u>	<u>June 30, 2022</u>
<b>Cash flows from operating activities:</b>			
Cash generated from operations	30	₩ 1,766,782	₩ (380,536)
Interest received		76,212	24,394
Interest paid		(167,826)	(50,123)
Dividends received		99	-
Income tax paid		(378,837)	(144,699)
<b>Net cash provided by (used in) operating activities</b>		<u>1,296,430</u>	<u>(550,964)</u>
<b>Cash flows from investing activities:</b>			
<b>Cash inflow from investing activities:</b>			
Decrease in other receivables		158,114	9,567
Decrease in other non-current receivables		3,110	5,263
Proceeds from disposal of property, plant and equipment		3,047	6,244
Proceeds from disposal of intangible assets		1,271	8,546
Government grants received		130,463	96,419
		<u>296,005</u>	<u>126,039</u>
<b>Cash outflow for investing activities:</b>			
Increase in other receivables		(122,832)	(6,227,703)
Increase in other non-current receivables		(64,946)	(11,968)
Acquisition of investments in associates and joint ventures		(46,575)	-
Acquisition of financial instruments		(86,424)	(71,855)
Acquisition of property, plant and equipment		(4,224,684)	(2,812,690)
Acquisition of intangible assets		(51,678)	(38,991)
Business combination		-	(8,286)
Other cash outflow for investing activities		(4,431)	-
		<u>(4,601,570)</u>	<u>(9,171,493)</u>
<b>Net cash used in investing activities</b>		<u>(4,305,565)</u>	<u>(9,045,454)</u>
<b>Cash flows from financing activities:</b>			
<b>Cash inflow from financing activities:</b>			
Proceeds from borrowings and others	30	2,442,507	1,281,834
Capital increase of Parent Company		-	10,096,371
Capital increase of Subsidiaries		1,054,990	474,944
		<u>3,497,497</u>	<u>11,853,149</u>
<b>Cash outflow for financing activities:</b>			
Repayments of borrowings and others	30	(1,600,311)	(1,057,135)
Capital decrease of a subsidiary		-	(604,437)
		<u>(1,600,311)</u>	<u>(1,661,572)</u>
<b>Net cash provided by financing activities</b>		<u>1,897,186</u>	<u>10,191,577</u>
Net (decrease) increase in cash and cash equivalents		(1,111,949)	595,159
Cash and cash equivalents at the beginning of the periods		5,937,967	1,282,880
Effects of exchange rate changes on cash and cash equivalents		34,188	105,442
<b>Cash and cash equivalents at the end of the periods</b>		<u>₩ 4,860,206</u>	<u>₩ 1,983,481</u>

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the interim condensed consolidated financial statements**  
**As of June 30, 2023, and December 31, 2022, and**  
**for the three-month and six-month periods ended June 30, 2023 and 2022**

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**1. GENERAL:**

General information about LG Energy Solution, Ltd. (the “Company” or the “Parent Company”) and its 18 subsidiaries (collectively, the “Group”) is as follows:

**1.1 Company Information**

The Parent Company, a split-off of LG Chem Ltd.’s battery division, was incorporated on December 1, 2020.

As of June 30, 2023, the Company is engaged in the battery industry, with its manufacturing facilities located in Ochang.

The Company’s shares have been listed on the Korea Exchange since January 27, 2022, and the share capital is ₩117,000 million as of June 30, 2023. The largest shareholder of the Company is LG Chem Ltd., which holds 81.84% of the Company’s ordinary shares.

The Company is authorized to issue 800 million shares (₩500 per share) and has issued 234 million of ordinary shares as of June 30, 2023.

**1.2 Business Overview**

The Group is engaged in providing energy solution services.

The Group manufactures and supplies batteries ranging from IT and new application batteries for mobile phones and laptops to automotive batteries for electric vehicles and ESS batteries. Demand for mobile batteries for new applications, such as electric tools and other electrical devices, as well as traditional IT devices, is increasing recently, and the automotive battery business is also expected to expand rapidly due to increasing demand for batteries associated with enhanced environment regulation in developed countries. Demand for ESS is expanding with an increasing importance of efficient usage of electricity and generation of renewable energy.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the interim condensed consolidated financial statements**  
**As of June 30, 2023, and December 31, 2022, and**  
**for the three-month and six-month periods ended June 30, 2023 and 2022**

**1.3 Consolidated Subsidiaries and Investments in Associates and Joint Ventures**

	Ownership (%)		Location	Closing month	Business
	June 30, 2023	December 31, 2022			
<b>Subsidiaries:</b>					
LG Energy Solution (Nanjing) Co., Ltd.	100	100	China	December	Mobile battery manufacturing, sales, and others
LG Energy Solution Michigan Inc. (*1)	100	100	USA	December	Automotive battery research and manufacturing
LG Energy Solution Battery (Nanjing) Co., Ltd.	100	100	China	December	Automotive battery manufacturing and sales
LG Energy Solution Wroclaw sp. z o.o.	100	100	Poland	December	Automotive battery manufacturing and sales
LG Energy Solution Australia Pty Ltd.	100	100	Australia	December	ESS battery sales
LG Energy Solution Technology (Nanjing) Co., Ltd.	100	100	China	December	Automotive battery manufacturing, sales, and others
Ultium Cells Holdings LLC (*2)	50	50	USA	December	Automotive battery manufacturing and sales
Ultium Cells LLC (*2)	50	50	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Europe GmbH	100	100	Germany	December	ESS battery sales and others
LG Energy Solution (Taiwan) Ltd.	100	100	Taiwan	December	Mobile battery sales and others
Areum noori Co., Ltd.	100	100	Korea	December	Facility management and cleaning
LG Energy Solution Fund I LLC	100	100	USA	December	Investment in ventures
LG Energy Solution Vertech Inc.	100	-	USA	December	ESS battery installation service
LG Energy Solution Arizona, Inc. (*3)	100	-	USA	December	Mobile battery manufacturing and sales
Baterias De Castilla, S.L.	100	-	Spain	December	Others
L-H Battery Company, Inc (*4)	51	-	USA	December	Automotive battery manufacturing and sales
LG Energy Solution India Private Limited (*5)	100	-	India	December	Mobile battery sales and others
LG Energy Solution Arizona ESS, Inc. (*6)	100	-	USA	December	ESS battery manufacturing and sales
<b>Associates and joint ventures:</b>					
VINFAST LITHIUM BATTERY PACK LLC (*7)	35	35	Vietnam	December	Mobile battery manufacturing, sales, and others
Jiangxi VL Battery Co., Ltd. (*8)	34	34	China	December	Mobile battery manufacturing, sales, and others
PT. HLI Green Power	50	50	Indonesia	December	Automotive battery manufacturing and sales
Sama Aluminium (*9)	10.2	-	Korea	December	Aluminium manufacturing, sales, and others

(\*1) LG Energy Solution Michigan Inc. owns 50% of Ultium Cells LLC's shares.

(\*2) During the previous year, the Group acquired 50% ownership of Ultium Cells Holdings LLC by contributing the entire stake it held in Ultium Cells LLC. The Group does not hold a majority ownership interest in Ultium Cells LLC or Ultium Cells Holdings LLC. According to the arrangement between shareholders, however, the Group holds the majority of voting rights in the decision-making process of the entity and has the ability to affect the variable returns by engaging in the entity's production and cost management. This implies that the Group exercises control over the entity.

(\*3) During the current period, ES America LLC changed its name to LG Energy Solution Arizona, Inc.

(\*4) During the current period, the Group newly acquired 51% of L-H Battery Company, Inc for ₩515,606 million.

(\*5) During the current period, the Group newly acquired 100% of LG Energy Solution India Private Limited for ₩563 million.

(\*6) During the current period, the Group newly acquired 100% of LG Energy Solution Arizona ESS, Inc. for ₩39,936 million.

(\*7) Although the Group holds 35% ownership interest in VINFAST LITHIUM BATTERY PACK LLC, it has been classified as a joint venture as it meets the classification criteria of a joint venture, including the existence of contractual arrangements that effectively results in unanimous consent.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the interim condensed consolidated financial statements**  
**As of June 30, 2023, and December 31, 2022, and**  
**for the three-month and six-month periods ended June 30, 2023 and 2022**

(\*8) As a company established under a joint arrangement in which the Group participated, the investee is structured as a separate vehicle over which the Group has rights to the net assets. Therefore, it is classified as a joint venture.

(\*9) During the current period, the Group newly acquired 10.2% of the shares in Sama Aluminium for ₩46,575 million. Although the ownership is less than 20%, the arrangement between shareholders ensures that the Group has the ability to participate in the decision-making process, thus exerting significant influence over the entity. As a result, the entity is classified as an associate.

**1.4 Summarized Financial Information of Subsidiaries, Associates and Joint Ventures**

Summarized financial information of subsidiaries, associates and joint ventures (before the elimination of intercompany transactions and adjustments for differences in accounting policies) for the six-month periods ended June 30, 2023 and 2022, is as follows (Korean won in millions):

	June 30, 2023			2023	
	Asset	Liability	Equity	Revenue	Net income (loss)
<b>Subsidiaries:</b>					
LG Energy Solution (Nanjing) Co., Ltd.	₩ 6,038,141	₩ 2,992,718	₩ 3,045,423	₩ 4,681,953	₩ 380,402
LG Energy Solution Michigan Inc.	4,631,345	1,281,813	3,349,532	1,713,189	217,922
LG Energy Solution Battery (Nanjing) Co., Ltd.	896,479	402,092	494,387	909,634	67,674
LG Energy Solution Wroclaw sp. z o.o.	10,539,744	7,510,461	3,029,283	7,854,312	378,796
LG Energy Solution Australia Pty Ltd.	11,766	9,296	2,470	9,028	463
LG Energy Solution Technology (Nanjing) Co., Ltd.	2,548,461	1,242,956	1,305,505	1,431,581	134,198
Ultium Cells Holdings LLC(*1)	7,560,235	2,355,060	5,205,175	956,819	186,002
Ultium Cells LLC	7,560,235	2,355,060	5,205,175	956,819	186,002
LG Energy Solution Europe GmbH	230,766	179,043	51,723	114,880	1,752
LG Energy Solution (Taiwan) Ltd.	3,535	713	2,822	2,973	206
Areum noori Co., Ltd.	3,620	2,069	1,551	5,745	138
LG Energy Solution Fund I LLC	35,390	330	35,060	-	(681)
LG Energy Solution Vertech Inc.	107,128	51,104	56,024	82,392	18,222
LG Energy Solution Arizona, Inc. (*2)	143,624	39,888	103,736	-	(333)
Baterias De Castilla, S.L.	4	-	4	-	-
L-H Battery Company, Inc	1,154,344	147,599	1,006,745	-	6,370
LG Energy Solution India Private Limited	4,988	4,080	908	3,855	341
LG Energy Solution Arizona ESS, Inc.	39,384	-	39,384	-	-
<b>Associates and joint ventures:</b>					
VINFAST LITHIUM BATTERY PACK LLC	12,003	6,265	5,738	1,087	(1,975)
Jiangxi VL Battery Co., Ltd.	45,159	32,359	12,800	2,477	(6,678)
PT. HLI Green Power	1,005,615	556,842	448,773	-	(9,113)
Sama Aluminium	412,981	156,248	256,733	137,932	2,863

(\*1) Ultium Cells Holdings LLC holds 100% of Ultium Cells LLC's shares. The information is on the consolidated basis.

(\*2) During the current period, ES America LLC changed its name to LG Energy Solution Arizona, Inc.

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	December 31, 2022			2022	
	Asset	Liability	Equity	Revenue	Net income (loss)
<b>Subsidiaries:</b>					
LG Energy Solution (Nanjing) Co., Ltd.	₩ 5,486,991	₩ 2,474,044	₩ 3,012,947	₩ 3,490,262	₩ 294,642
LG Energy Solution Michigan Inc.	3,573,800	1,031,654	2,542,146	985,042	5,228
LG Energy Solution Battery (Nanjing) Co., Ltd.	972,715	578,513	394,202	833,422	78,935
LG Energy Solution Wroclaw sp. z o.o.	9,845,139	7,654,235	2,190,904	3,621,908	99,825
LG Energy Solution Australia Pty Ltd.	12,903	10,926	1,977	11,471	(587)
LG Energy Solution Technology (Nanjing) Co., Ltd.	2,170,096	990,347	1,179,749	1,086,483	75,774
Ultium Cells Holdings LLC(*)	5,255,664	1,532,150	3,723,514	-	(8,471)
Ultium Cells LLC	5,255,664	1,532,150	3,723,514	-	(8,471)
LG Energy Solution Europe GmbH	252,708	205,366	47,342	122,542	3,433
LG Energy Solution (Taiwan) Ltd.	3,468	904	2,564	2,715	233
Areum noori Co., Ltd.	3,330	1,917	1,413	4,003	20
LG Energy Solution Fund I LLC	22,225	2	22,223	-	(705)
LG Energy Solution Vertech Inc.	89,508	46,357	43,151	16,755	(2,415)
ES America LLC	107,288	38,507	68,781	-	(366)
Baterias De Castilla, S.L.	4	-	4	-	-
<b>Associates and joint ventures:</b>					
VINFAST LITHIUM BATTERY PACK LLC	13,297	5,888	7,409	5,743	(871)
Jiangxi VL Battery Co., Ltd.	82,311	43,170	39,141	847	(9,309)
PT. HLI Green Power	667,930	227,305	440,625	-	(2,389)

(\*1) Ultium Cells Holdings LLC holds 100% of Ultium Cells LLC's shares. The information is on the consolidated basis.

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**1.5 Information of Subsidiaries Whose Non-Controlling Interests are Important to the Reporting Company**

Percentage of ownership held by non-controlling interests and cumulative non-controlling interests as of June 30, 2023 and 2022, and net income (loss) and total comprehensive income (loss) allocated to non-controlling interests for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<b>2023</b>	
	<b>Ultium Cells Holdings LLC</b>	<b>L-H Battery Company, Inc.</b>
Percentage of ownership held by non-controlling interests	50.0%	49.0%
Cumulative non-controlling interests	₩ 2,599,679	₩ 492,796
Net income allocated to non-controlling interests	93,001	3,121
Total comprehensive income allocated to non-controlling interests	180,183	(1,587)

  

	<b>2022</b>	
	<b>Ultium Cells LLC (*)</b>	
Percentage of ownership held by non-controlling interests		50.0%
Cumulative non-controlling interests	₩	1,861,547
Net income allocated to non-controlling interests		(4,235)
Total comprehensive income allocated to non-controlling interests		96,112

(\*) The consolidated financial information of Ultium Cells LLC, which is 100% owned by Ultium Cells Holdings LLC.

The interim condensed consolidated statements of cash flows of subsidiaries whose non-controlling interests are material to the Group for the six-month periods ended June 30, 2023 and 2022, are as follows (before the elimination of intercompany transactions) (Korean won in millions):

	<b>2023</b>	
	<b>Ultium Cells Holdings LLC</b>	<b>L-H Battery Company, Inc.</b>
Cash flows from operating activities	₩ (68,549)	₩ 6,386
Cash flows from investing activities	(1,687,357)	(194,242)
Cash flows from financing activities	1,640,946	1,000,027
Effects of exchange rate changes on cash and cash equivalents	1,731	(1,206)
(Decrease) increase in cash and cash equivalents	(113,229)	810,965
Cash and cash equivalents at the beginning of the period	515,833	-
Cash and cash equivalents at the end of the period	₩ 402,604	₩ 810,965

  

	<b>2022</b>	
	<b>Ultium Cells LLC (*)</b>	
Cash flows from operating activities	₩	(50,914)
Cash flows from investing activities		(871,079)
Cash flows from financing activities		947,745
Effects of exchange rate changes on cash and cash equivalents		56,438
Increase in cash and cash equivalents		82,190
Cash and cash equivalents at the beginning of the period		471,494
Cash and cash equivalents at the end of the period	₩	553,684

(\*) The consolidated financial information of Ultium Cells LLC, which is 100% owned by Ultium Cells Holdings LLC.

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**1.6 Changes in Scope for Consolidation**

New subsidiaries included in the interim condensed consolidated financial statements for the six-month period ended June 30, 2023, are as follows:

	<u>Reason for the inclusion</u>
L-H Battery Company, Inc	Incorporated during the current period
LG Energy Solution India Private Limited	Incorporated during the current period
LG Energy Solution Arizona ESS, Inc.	Incorporated during the current period

**2. BASIS OF PREPARATION AND CHANGES IN ACCOUNTING POLICIES:**

**2.1 Basis of Preparation**

The Group's interim condensed consolidated financial statements were prepared in accordance with Korean International Financial Reporting Standard ("K-IFRS") 1034 *Interim Financial Reporting* as part of the period covered by the Group's K-IFRS annual consolidated financial statements. In order to be understood, these interim condensed consolidated financial statements should be read in conjunction with the annual consolidated financial statements as of and for the fiscal year ended December 31, 2022, prepared in accordance with K-IFRSs.

**2.2 Application of the Amended and Enacted Standards**

The significant accounting policies applied in the preparation of the interim condensed consolidated financial statements are consistent with the accounting policies adopted in the preparation of the annual consolidated financial statements as of and for the fiscal year ended December 31, 2022, except for the impacts related to the adoption of the standards or interpretations described below.

1) New and amended K-IFRSs and new interpretations that are effective for the current period

- K-IFRS 1001 *Presentation of Financial Statements* and IFRS Practice Statement 2 *Making Materiality Judgements* - Disclosure of Accounting Policies (Amendments)

The amendments change the requirements in K-IFRS 1001 with regard to disclosure of accounting policies. The amendments replace all instances of the term 'significant accounting policies' with 'material accounting policy information.' Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general-purpose financial statements make on the basis of those financial statements.

The supporting paragraphs in K-IFRS 1001 are also amended to clarify that accounting policy information that relates to immaterial transactions, other events or conditions is immaterial and need not be disclosed. Accounting policy information may be material because of the nature of the related transactions, other events or conditions, even if the amounts are immaterial. However, not all accounting policy information relating to material transactions, other events or conditions is itself material.

- K-IFRS 1001 *Presentation of Financial Statements* - Disclosure of financial liabilities with condition to adjust exercise price (Amendments)

The amendments require disclosure of valuation gains or losses (limited to those recognized in the profit or loss) of the conversion options or warrants (or financial liabilities including them) if all or part of the financial instrument with exercise price that is adjusted depending on the issuer's share price change is classified as financial liability as defined in paragraph 11 (2) of K-IFRS 1032.

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- K-IFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* - Definition of Accounting Estimates (Amendments)

The amendments replace the definition of a change in accounting estimates with the definition of accounting estimates. Under the new definition, accounting estimates are “monetary amounts in financial statements that are subject to measurement uncertainty.”

The definition of a change in accounting estimates was deleted. However, the International Accounting Standards Board retained the concept of changes in accounting estimates in the standard with the following clarifications:

- A change in accounting estimate that results from new information or new developments is not the correction of an error.
- The effects of a change in an input or a measurement technique used to develop an accounting estimate are changes in accounting estimates if they do not result from the correction of prior-period errors.

- K-IFRS 1012 *Income Taxes* - Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments)

The amendments introduce a further exception from the initial recognition exemption. Under the amendments, an entity does not apply the initial recognition exemption for transactions that give rise to equal taxable and deductible temporary differences.

Depending on the applicable tax law, equal taxable and deductible temporary differences may arise on initial recognition of an asset and a liability in a transaction that is not a business combination and affects neither accounting nor taxable profit. For example, this may arise upon recognition of a lease liability and the corresponding right-of-use asset applying K-IFRS 1116 at the commencement date of a lease.

Following the amendments to K-IFRS 1012, an entity is required to recognize the related deferred tax asset and liability, with the recognition of any deferred tax asset being subject to the recoverability criteria in K-IFRS 1012.

The board also adds an illustrative example to K-IFRS 1012 that explains how the amendments are applied. The amendments apply to transactions that occur on or after the beginning of the earliest comparative period presented. In addition, at the beginning of the earliest comparative period, an entity recognizes:

- A deferred tax asset (to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized) and a deferred tax liability for all deductible and taxable temporary differences associated with:
  - Right-of-use assets and lease liabilities
  - Decommissioning, restoration and similar liabilities and the corresponding amounts recognized as part of the cost of the related asset
- The cumulative effect of initially applying the amendments as an adjustment to the opening balance of retained earnings (or other component of equity, as appropriate) at that date

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2) New and revised K-IFRSs in issue but not yet effective

- K-IFRS 1001 *Presentation of Financial Statements* - Classification of Liabilities as Current or Non-current (Amendments)

The amendments clarify that the classification of liabilities as current or non-current is based on rights that are in existence at the end of the reporting period, specify that classification is unaffected by expectations about whether an entity will exercise its right to defer settlement of a liability, explain that rights are in existence if covenants are complied with at the end of the reporting period and introduce a definition of ‘settlement’ to make it clear that settlement refers to the transfer to the counterparty of cash, equity instruments, other assets or services.

The amendments specify that only covenants that an entity is required to comply with on or before the end of the reporting period affect the entity’s right to defer settlement of a liability for at least 12 months after the reporting date. Such covenants affect whether the right exists at the end of the reporting period, even if compliance with the covenant is assessed only after the reporting date. The amendments also specify that the right to defer settlement is not affected if an entity only has to comply with a covenant after the reporting period. However, if the entity’s right to defer settlement of a liability is subject to the entity complying with covenants within 12 months after the reporting period, an entity discloses information that enables users of financial statements to understand the risk of the liabilities becoming repayable within 12 months after the reporting period. This would include information about the covenants (including the nature of the covenants and when the entity is required to comply with them), the carrying amount of related liabilities and the facts and circumstances, if any, that indicate that the entity may have difficulties complying with the covenants.

The amendments are applied retrospectively for annual reporting periods beginning on or after January 1, 2024, with early application permitted.

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**3. FINANCIAL RISK MANAGEMENT:**

**3.1 Financial Risk Factors**

The Group's activities expose it to a variety of financial risks: market, credit and liquidity. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the financial performance of the Group. The Group uses derivative financial instruments to hedge certain risk exposures.

Risk management is carried out by the Group's finance team under policies approved by the board of directors. The finance team identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units. The board of directors reviews and approves written principles for overall risk management as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk and credit risk; use of derivative financial instruments and non-derivative financial instruments; and investment of excess liquidity.

(1) Market risk

1) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from foreign currency exposures, primarily with respect to the US dollar. Foreign exchange risk arises from forecast transactions and recognized assets and liabilities.

Management has set up a policy to require each company in the Group to manage its foreign exchange risk against its functional currency. The Group manages maximum loss for currency risk exposures within acceptable range using currency risk management model and employs who are exclusively responsible for currency risk management.

The Group has certain investments in foreign operations whose net assets are exposed to foreign exchange risk. Currency exposure arising from the net assets of the Group's foreign operations is managed primarily through borrowings denominated in the relevant foreign currencies.

Monetary assets and liabilities denominated in foreign currencies as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<b>June 30, 2023</b>		<b>December 31, 2022</b>	
	<b>Assets</b>	<b>Liabilities</b>	<b>Assets</b>	<b>Liabilities</b>
USD	₩ 4,488,008	₩ 4,194,431	₩ 3,628,076	₩ 4,457,064
EUR	551,181	4,546,465	532,887	4,976,907
JPY	2,887	106,300	12,975	104,805
CNY and others	256,808	728	176,651	423

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With all other variables held constant as of June 30, 2023, and December 31, 2022, a hypothetical change in exchange rates by 10% would have increased (decreased) the Group's profit before income tax as follows (Korean won in millions):

	<b>June 30, 2023</b>		<b>December 31, 2022</b>	
	<b>10% Increase</b>	<b>10% Decrease</b>	<b>10% Increase</b>	<b>10% Decrease</b>
USD	₩ 29,358	₩ (29,358)	₩ (82,899)	₩ 82,899
EUR	(399,528)	399,528	(444,402)	444,402
JPY	(10,341)	10,341	(9,183)	9,183
CNY and others	25,608	(25,608)	17,623	(17,623)

The above sensitivity analysis has been performed for monetary assets and liabilities denominated in foreign currencies as of the end of the quarter.

As of June 30, 2023, the Group entered into foreign currency forward to hedge change in exchange rates and the details are as follows (Korean won in millions):

	<b>Contractor</b>	<b>Contract amount (in millions)</b>	<b>Contract exchange rate</b>	<b>Contract inception date</b>	<b>Contract maturity</b>	<b>Book amount</b>	
						<b>Assets</b>	<b>Liabilities</b>
Currency forward (*)	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	₩ 67,386	₩ -
	KB Kookmin Bank	USD 500	1,102.83	2020.11.24	2029.04.16	61,793	-

(\*) A derivative where hedge accounting is not applied.

## 2) Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from deposits and borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises through floating-rate deposits and borrowings. The objective of interest rate risk management lies in maximizing corporate value by minimizing uncertainty in interest rate fluctuations and net interest expense.

The Group adequately minimizes risks from interest rate fluctuations through various policies, such as sharing excess cash within the Group (internal cash sharing) to minimize external borrowings; avoiding high-rate borrowings; reforming capital structure; managing an appropriate ratio of fixed-rate borrowings and floating-rate borrowings; monitoring a fluctuation of domestic and foreign interest rates daily, weekly and monthly; establishing alternatives; and balancing floating-rate short-term borrowings with floating-rate deposits.

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The table below summarizes the impact of increases/decreases of interest rate on the Group's equity and profit before tax for the period. The analysis is based on the assumption that the interest rate has increased/decreased by 1% (100 bp) with all other variables held constant (Korean won in millions):

	<b>Effect on profit and loss before tax</b>		<b>Impact on equity</b>	
	<b>June 30, 2023</b>	<b>December 31, 2022</b>	<b>June 30, 2023</b>	<b>December 31, 2022</b>
Increase	₩ (54,162)	₩ (49,557)	₩ (54,162)	₩ (49,557)
Decrease	54,162	49,557	54,162	49,557

3) Price risk

The Group is exposed to price risks from equity instruments. As of June 30, 2023, the fair value of equity instruments is ₩279,742 million. With all other variables held constant, a price change in equity instruments by 10% would have changed the Group's equity by ₩27,974 million before tax

(2) Credit risk

Credit risk arises from trade receivables that the Group holds as well as financial assets at amortized cost or at fair value through other comprehensive income ("FVOCI").

The Group has established the following policies and procedures to manage credit risks:

To manage credit risks relating to trade receivables, the Group evaluates the credit rating of customers and determines credit limit for each customer based on the information provided by credit rating agencies and other available financial information before commencing business with new customers. The credit risks relating to trade receivables are also mitigated by insurance contracts and collateral, as well as payment guarantees.

The Group has entered into export bond insurance contracts with Korea Trade Insurance Corporation to mitigate credit risks relating to export trade receivables to overseas customers. The Group is also provided with collateral by customers depending on their credit rating or payment guarantees from the customers' financial institutions, if necessary.

The Group has deposited its cash and cash equivalents and other long-term deposits in several financial institutions, such as Woori Bank and others. The Group has also entered into derivative contracts with several financial institutions. The Group maintains business relationship with the financial institutions with high credit ratings evaluated by independent credit rating agencies, and accordingly, credit risks associated with these financial institutions are limited.

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1) Trade receivables

The Group applies the simplified approach in measuring expected credit losses, which uses lifetime expected provisions for trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The provisions for receivables as of June 30, 2023, and December 31, 2022, are as follows. Expected credit losses include forward-looking information (Korean won in millions):

	<u>Receivables not past due (*)</u>	<u>Receivables past due, but not impaired (*)</u>	<u>Receivables impaired (individually evaluated)</u>	<u>Total</u>
<b>June 30, 2023 (trade receivables)</b>				
Gross carrying amount	₩ 5,202,697	₩ 286,864	₩ -	₩ 5,489,561
Expected loss rate	-	-	-	-
Provisions for receivables	-	-	-	-
<b>December 31, 2022 (trade receivables)</b>				
Gross carrying amount	₩ 4,732,757	₩ 159,787	₩ 1,234	₩ 4,893,778
Expected loss rate	-	-	100.00%	0.03%
Provisions for receivables	-	-	1,234	1,234

(\*) See Note 7.(3) for aging analysis.

Changes in the provisions for trade receivables for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	<u>2023</u>	<u>2022</u>
Beginning	₩ 1,234	₩ 11
Additions of provisions recognized in profit or loss during the current period	-	481
Business combination	-	724
Write-off	(1,234)	-
Exchange differences	-	18
Ending	<u>₩ -</u>	<u>₩ 1,234</u>

As of June 30, 2023, the carrying amount of trade receivables representing the maximum exposure to credit risk amounts to ₩5,489,561 million (as of December 31, 2022, was ₩4,892,544 million).

2) Other financial assets at amortized cost

As of June 30, 2023, the provision for other financial assets at amortized cost does not exist (as of December 31, 2022, ₩54 million).

All of the financial assets at amortized cost are considered to have low credit risk, and the provisions recognized during the period were, therefore, limited to 12 months' expected losses.

3) Debt instruments measured at FVOCI

Debt instruments measured at FVOCI include trade receivables to be discounted. The provisions for these instruments are recognized in profit or loss and reduce the amount that would have been recognized in other comprehensive income as a loss on fair value change.

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(3) Liquidity risk

The finance team of the Group monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining the limit of unused borrowings at an appropriate level so that the Group does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. The Group's liquidity management policy considers the Group's financing plans, covenants on the debt contracts, target financial ratios and, if applicable, other external regulatory requirements on the currency and others.

1) The table below analyzes the Group's derivative financial liabilities into relevant maturity groupings based on the remaining period from the reporting period to the contractual maturity date. Cash flows presented below are gross cash flows before discount and include cash flows for interests (Korean won in millions):

	<b>June 30, 2023</b>			
	<b>Less than 1 year</b>	<b>Between 1 year–2 years</b>	<b>Between 2–5 years</b>	<b>More than 5 years</b>
<b>Non-derivative instruments:</b>				
Borrowings	₩ 2,965,626	₩ 1,937,820	₩ 3,918,627	₩ 1,428,602
Lease liabilities	53,012	44,676	42,068	-
Trade and other payables	6,943,542	60,637	17,303	749
	<u>9,962,180</u>	<u>2,043,133</u>	<u>3,977,998</u>	<u>1,429,351</u>
<b>Derivative instruments:</b>				
Currency forwards settled in gross:				
Inflows	-	(656,400)	-	(656,400)
Outflows	-	567,800	-	551,415
	-	(88,600)	-	(104,985)
	<u>₩ 9,962,180</u>	<u>₩ 1,954,533</u>	<u>₩ 3,977,998</u>	<u>₩ 1,324,366</u>
	<b>December 31, 2022</b>			
	<b>Less than 1 year</b>	<b>Between 1 year–2 years</b>	<b>Between 2–5 years</b>	<b>More than 5 years</b>
<b>Non-derivative instruments:</b>				
Borrowings	₩ 2,969,739	₩ 1,686,157	₩ 2,726,522	₩ 1,253,521
Lease liabilities	41,833	38,891	48,955	539
Trade and other payables	6,723,796	32,613	3,043	950
	<u>9,735,368</u>	<u>1,757,661</u>	<u>2,778,520</u>	<u>1,255,010</u>
<b>Derivative instruments:</b>				
Currency forwards settled in gross:				
Inflows	(135,120)	(633,650)	-	(633,650)
Outflows	137,999	567,800	-	551,415
	2,879	(65,850)	-	(82,235)
	<u>₩ 9,738,247</u>	<u>₩ 1,691,811</u>	<u>₩ 2,778,520</u>	<u>₩ 1,172,775</u>

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2) As of June 30, 2023, the Group has entered into swap contracts, to which cash flow hedge accounting is applied, to avoid fluctuations in the market price of raw materials (Korean won in millions).

	Purpose of the contracts	Hedged items	Financial institution	Maturity	June 30, 2023		December 31, 2022	
					Assets	Liabilities	Assets	Liabilities
Merchandise (raw materials) swap (*)	Cash flow hedge	Non-ferrous metal	Citibank, etc.	2025.12	₩ 1,217	₩ 4,387	₩ 13,931	₩ 2,143

(\*) Gain (loss) on the contracts that hedge the cash flow risk of forecast transaction is recognized in accumulated other comprehensive income and is fully effective portion for hedging.

3) Details of financial guarantee contracts by maturity as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	June 30, 2023			
	Less than 1 year	Between 1 year-2 years	Between 2-5 years	More than 5 years
Financial guarantee contracts (*)	₩ 466,700	₩ -	₩ -	₩ -

  

	December 31, 2022			
	Less than 1 year	Between 1 year-2 years	Between 2-5 years	More than 5 years
Financial guarantee contracts (*)	₩ 450,525	₩ -	₩ -	₩ -

(\*) The Group has provided financial guarantees for joint ventures. The amount represents the maximum amount that can be guaranteed as of June 30, 2023, and December 31, 2022 (see Note 18).

### 3.2 Capital Risk Management

The Group's objectives for managing capital are to safeguard the Group's ability to continue to provide profits to shareholders and for other stakeholders as a going concern and to maintain an optimal capital structure to reduce the cost of capital.

Consistent with others in the industry, the Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings, less cash and cash equivalents. Total capital is calculated as 'equity' as shown in the interim condensed consolidated statements of financial position, plus net debt.

The gearing ratio and debt-to-equity ratio as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	June 30, 2023	December 31, 2022
Total borrowings (Note 14) (A)	₩ 9,340,589	₩ 8,109,253
Less: cash and cash equivalents (B)	(4,860,206)	(5,937,967)
Net debt (C=A+B)	4,480,383	2,171,286
Total liabilities (D)	19,265,936	17,705,683
Total equity (E)	23,128,717	20,593,762
Total capital (F=C+E)	₩ 27,609,100	₩ 22,765,048
Gearing ratio (C/F)	16.2%	9.5%
Debt-to-equity ratio (D/E)	83.3%	86.0%

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**3.3 Fair Value Estimation**

(1) The carrying amount and fair value of financial instruments by category as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<b>June 30, 2023</b>		<b>December 31, 2022</b>	
	<b>Carrying amount</b>	<b>Fair value</b>	<b>Carrying amount</b>	<b>Fair value</b>
<b>Financial assets (current):</b>				
Cash and cash equivalents	₩ 4,860,206	(*)	₩ 5,937,967	(*)
Trade receivables	5,357,563	(*)	4,771,846	(*)
Other receivables (excluding deposits from financial institutions)	505,824	(*)	462,188	(*)
Deposits from financial institutions	22,318	(*)	-	-
Current derivative financial assets	862	862	9,167	9,167
<b>Financial assets (non-current):</b>				
Deposits from financial institutions	66,199	(*)	70,997	(*)
Trade receivables	131,998	(*)	120,698	(*)
Other receivables (excluding deposits from financial institutions)	310,211	(*)	48,061	(*)
<b>Other non-current financial assets (measured at fair value):</b>				
Marketable financial assets	50,337	50,337	50,626	50,626
Non-marketable financial assets	351,813	351,813	259,127	259,127
Non-current derivative financial assets	5,078	5,078	9,323	9,323
Non-current derivative financial assets (currency forward)	129,179	129,179	89,475	89,475
<b>Financial liabilities (current):</b>				
Trade and other payables	6,943,541	(*)	6,723,796	(*)
Current borrowings (excluding lease liabilities)	2,654,815	(*)	2,826,757	(*)
Current derivative financial liabilities	3,584	3,584	1,401	1,401
Current derivative financial liabilities (currency forward)	-	-	2,522	2,522
Financial guarantee contract liabilities	2,437	(*)	-	-
<b>Financial liabilities (non-current):</b>				
Non-current borrowings (excluding lease liabilities)	6,551,542	6,508,865	5,157,273	5,083,456
Other non-current payables	78,689	(*)	36,606	(*)
Non-current derivative financial liabilities	803	803	742	742

(\*) Fair values for these financial assets and liabilities are not disclosed above as their carrying amounts are reasonable approximation of their fair values.

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(2) Fair values for measurement and disclosure are determined based on the following method:

Fair values of financial liabilities (non-current) are calculated by discounting the expected cash outflows by yield from corporate bonds. These bonds are Korean won denominated with credit rating same as that of the Parent Company (AA0). The applied discount rates as of June 30, 2023, and December 31, 2022, are as follows:

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
Discount rate	3.98% – 5.38%	4.94% – 5.33%

(3) Fair value hierarchy

Items that are measured at fair value are categorized by the fair value hierarchy levels, and the defined levels are as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities that the Group can access at the measurement date (Level 1).
- All inputs other than quoted prices included in Level 1 that are observable (either directly, i.e., prices, or indirectly, i.e., derived from prices) for the asset or liability (Level 2).
- Unobservable inputs for the asset or liability (Level 3).

As of June 30, 2023, and December 31, 2022, fair value hierarchy of the financial instruments that are consistently measured and recognized at fair value is as follows (Korean won in millions):

	<u>June 30, 2023</u>			
	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
<b>Financial assets/liabilities measured at fair value:</b>				
Current derivative financial assets	₩ -	₩ 862	₩ -	₩ 862
Non-current derivative financial assets	-	355	4,723	5,078
Non-current derivative financial assets (currency forward)	-	129,179	-	129,179
Other non-current financial assets (marketable financial assets)	50,337	-	-	50,337
Other non-current financial assets (non-marketable financial assets)	-	-	351,813	351,813
Current derivative financial liabilities	-	3,584	-	3,584
Non-current derivative financial liabilities	-	803	-	803
<b>Financial assets/liabilities not measured at fair value:</b>				
Non-current borrowings (excluding lease liabilities)	-	6,805,865	-	6,805,865

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	<b>December 31, 2022</b>				
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>	
<b>Financial assets/liabilities measured at fair value:</b>					
Current derivative financial assets	₩	- ₩	9,167 ₩	- ₩	9,167
Non-current derivative financial assets		-	4,764	4,559	9,323
Non-current derivative financial assets (currency forward)		-	89,475	-	89,475
Other non-current financial assets (marketable financial assets)	50,626	-	-	-	50,626
Other non-current financial assets (non-marketable financial assets)	-	-	259,127	-	259,127
Current derivative financial liabilities		-	1,401	-	1,401
Current derivative financial liabilities (currency forward)		-	2,522	-	2,522
Non-current derivative financial liabilities		-	742	-	742
<b>Financial assets/liabilities not measured at fair value:</b>					
Non-current borrowings (excluding lease liabilities)		-	5,083,456	-	5,083,456

**4. SIGNIFICANT ACCOUNTING ESTIMATES AND ASSUMPTIONS:**

The preparation of interim condensed consolidated financial statements requires the Group to make estimates and assumptions concerning the future. Management also needs to exercise judgement in applying the Group's accounting policies. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates may differ from the related actual results.

The significant estimates and assumptions made by management on the application of the Group's interim condensed consolidated financial statements are the same as those of the annual consolidated financial statements as of and for the year ended December 31, 2022.

The followings are the management's estimates and assumptions for its judgements regarding significant risks that may result in adjustments to the carrying amounts of assets and liabilities in the next fiscal year:

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(1) Income taxes

The Group's taxable income generated from these operations is subject to income taxes based on tax laws and interpretations of tax authorities in numerous jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain. If certain portion of the taxable income is not used for investments, increase in wages or dividends, the Group is liable to pay additional income tax calculated based on the tax laws. Accordingly, the measurement of current and deferred income taxes is affected by these tax effects. As the Group's income tax is dependent on the investments, increase in wages and dividends, there is an uncertainty measuring the final tax effects.

(2) Provisions

The Group recognizes provisions for product warranties as explained in Note 15. These provisions are estimated based on past experience. Provisions related to voluntary recalls by the Group's customer are estimated based on the number of vehicles subject to recall, estimated total repair cost and cost-sharing ratio.

(3) Fair value of financial instruments

The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group uses its judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing at June 30, 2023 (see Note 3.3).

(4) Impairment of financial assets

The provision for impairment for financial assets is based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation based on the Group's past experience and existing market conditions, as well as forward-looking estimates at the end of each reporting period (see Note 3.1.(2)).

(5) Net defined benefit liability (asset)

The present value of net defined benefit liability (asset) depends on a number of factors that are determined on an actuarial basis using a number of assumptions, including the discount rate (see Note 16).

(6) Lease

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option or not exercise a termination option. Periods covered by the extension option (or the termination option) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

The lease term is reassessed if an option is actually exercised (or not exercised) or the Group becomes obliged to exercise (or not exercise) it. The assessment of reasonable certainty is only revised if a significant event or a significant change in circumstances occurs, which affects this assessment, and that is within the control of the lessee.

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**5. FINANCIAL INSTRUMENTS BY CATEGORY:**

(1) Categorizations of financial instruments are as follows (Korean won in millions):

<b>June 30, 2023</b>					
<b>Financial assets</b>	<b>Financial assets at amortized cost</b>	<b>Financial assets at fair value through profit or loss</b>	<b>Financial assets at FVOCI (*1)</b>	<b>Other financial assets (*2)</b>	<b>Total</b>
Cash and cash equivalents	₩ 4,860,206	₩ -	₩ -	₩ -	₩ 4,860,206
Trade receivables	5,104,683	-	252,880	-	5,357,563
Non-current trade receivables	131,998	-	-	-	131,998
Other current receivables	528,142	-	-	-	528,142
Other non-current receivables	376,410	-	-	-	376,410
Other current financial assets	-	-	-	862	862
Other non-current financial assets	-	256,310	279,742	355	536,407
	<u>₩ 11,001,439</u>	<u>₩ 256,310</u>	<u>₩ 532,622</u>	<u>₩ 1,217</u>	<u>₩ 11,791,588</u>

<b>June 30, 2023</b>			
<b>Financial liabilities</b>	<b>Financial liabilities at amortized cost</b>	<b>Other financial liabilities (*3)</b>	<b>Total</b>
Trade payables	₩ 4,397,906	₩ -	₩ 4,397,906
Other payables	2,545,635	-	2,545,635
Other non-current payables	78,689	-	78,689
Current borrowings	2,654,815	51,166	2,705,981
Non-current borrowings	6,551,542	83,066	6,634,608
Other current financial liabilities	2,437	3,584	6,021
Other non-current financial liabilities	-	803	803
	<u>₩ 16,231,024</u>	<u>₩ 138,619</u>	<u>₩ 16,369,643</u>

(\*1) At initial recognition, the Group made an irrevocable election to designate investments in equity instruments as at FVOCI. These instruments are held for the strategic purposes, not for short-term trading. In addition, the Group classified trade receivables under the 'hold to collect and sell' business model as financial assets at FVOCI.

(\*2) Other financial assets include derivative assets.

(\*3) Other financial liabilities include lease liabilities and derivative liabilities.

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<b>December 31, 2022</b>					
<b>Financial assets</b>	<b>Financial assets at amortized cost</b>	<b>Financial assets at FVPL</b>	<b>Financial assets at FVOCI (*1)</b>	<b>Other financial assets (*2)</b>	<b>Total</b>
Cash and cash equivalents	₩ 5,937,967	₩ -	₩ -	₩ -	₩ 5,937,967
Trade receivables	4,534,502	-	237,344	-	4,771,846
Non-current trade receivables	120,698	-	-	-	120,698
Other current receivables	462,188	-	-	-	462,188
Other non-current receivables	119,058	-	-	-	119,058
Other current financial assets	-	-	-	9,167	9,167
Other non-current financial assets	-	158,202	245,585	4,764	408,551
	<u>₩ 11,174,413</u>	<u>₩ 158,202</u>	<u>₩ 482,929</u>	<u>₩ 13,931</u>	<u>₩ 11,829,475</u>

<b>December 31, 2022</b>				
<b>Financial liabilities</b>	<b>Financial liabilities at amortized cost</b>	<b>Financial liabilities at FVPL</b>	<b>Other financial liabilities (*3)</b>	<b>Total</b>
Trade payables	₩ 3,841,766	₩ -	₩ -	₩ 3,841,766
Other payables	2,882,030	-	-	2,882,030
Other non-current payables	36,606	-	-	36,606
Current borrowings	2,826,757	-	39,944	2,866,701
Non-current borrowings	5,157,273	-	85,279	5,242,552
Other current financial liabilities	-	2,522	1,401	3,923
Other non-current financial liabilities	-	-	742	742
	<u>₩ 14,744,432</u>	<u>₩ 2,522</u>	<u>₩ 127,366</u>	<u>₩ 14,874,320</u>

(\*1) At initial recognition, the Group made an irrevocable election to designate investments in equity instruments as at FVOCI. These instruments are held for the strategic purposes, not for short-term trading. In addition, the Group classified trade receivables under the 'hold to collect and sell' business model as financial assets at FVOCI.

(\*2) Other financial assets include derivative assets.

(\*3) Other financial liabilities include lease liabilities and derivative liabilities.

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(2) Net gains (losses) on each category of financial instruments for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>		<u>June 30, 2022</u>	
	<u>Three months</u>	<u>Six months</u>	<u>Three months</u>	<u>Six months</u>
<b>Interest income:</b>				
Financial assets at amortized cost	₩ 37,326	₩ 81,860	₩ 38,877	₩ 71,232
<b>Interest expense:</b>				
Financial liabilities at amortized cost	(78,796)	(152,937)	(20,755)	(41,100)
Other financial liabilities	(616)	(1,197)	(696)	(1,166)
Financial assets at amortized cost (*1)	(3,591)	(5,224)	(116)	(205)
Financial assets at FVOCI (*1)	-	-	-	(31)
<b>Gains or loss on valuation:</b>				
Financial assets at FVOCI (*2)	(8,242)	2,095	4,527	7,668
Derivative instruments	(7,989)	24,229	(25,498)	47,373
<b>Exchange differences:</b>				
Financial assets at amortized cost	90,791	202,955	284,755	353,896
Financial liabilities at amortized cost	177,619	159,088	(377,423)	(500,415)
Financial assets at FVPL	1,425	2,433	1,115	1,464

(\* ) Fees paid to financial institutions for factoring.

**6. CASH AND CASH EQUIVALENTS:**

(1) Details of cash and cash equivalents as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
Bank deposits and cash on hand	₩ 2,006,276	₩ 1,062,442
Cash equivalents	<u>2,853,930</u>	<u>4,875,525</u>
	<u>₩ 4,860,206</u>	<u>₩ 5,937,967</u>

(2) As of June 30, 2023, cash and cash equivalents include ₩2,982 million, which is subject to a restriction on the use and remittance (as of December 31, 2022, were ₩472 million).

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**7. TRADE AND OTHER RECEIVABLES:**

(1) Trade and other receivables and their provisions for impairment as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	June 30, 2023			December 31, 2022		
	Gross amount	Provision for impairment	Carrying amount	Gross amount	Provision for impairment	Carrying amount
Trade receivables	₩ 5,357,563	-	₩ 5,357,563	₩ 4,773,080	₩ (1,234)	₩ 4,771,846
Non-current trade receivables	131,998	-	131,998	120,698	-	120,698
Other current receivables	528,142	-	528,142	462,242	(54)	462,188
Other non-current receivables	376,410	-	376,410	119,058	-	119,058
	<u>₩ 6,394,113</u>	<u>₩ -</u>	<u>₩ 6,394,113</u>	<u>₩ 5,475,078</u>	<u>₩ (1,288)</u>	<u>₩ 5,473,790</u>

(2) Details of other receivables as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	June 30, 2023	December 31, 2022
<b>Current:</b>		
Non-trade receivables	₩ 474,749	₩ 437,182
Deposits from financial institutions (*)	22,318	-
Accrued income	1,223	2,963
Guarantee deposits provided	29,852	22,043
	<u>528,142</u>	<u>462,188</u>
<b>Non-current:</b>		
Non-trade receivables	263,488	5,201
Due from financial institutions (*)	66,199	70,997
Loans	5,543	3,900
Guarantee deposits provided	41,180	38,960
	<u>376,410</u>	<u>119,058</u>
	<u>₩ 904,552</u>	<u>₩ 581,246</u>

(\*) As of June 30, 2023, the due from financial institutions is subject to withdrawal restrictions, which includes ₩60,000 million for the Agreement on the Win-Win Growth Cooperation, ₩5,000 million for the loans in relation to the employee stock ownership, USD 17 million in relation to deposit for construction cost and PLN 4 million in relation to guarantee deposit for transfer of dangerous waste abroad.

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(3) The aging analysis of trade and other receivables as of June 30, 2023, and December 31, 2022, is as follows (Korean won in millions):

	June 30, 2023		December 31, 2022	
	Trade receivables	Other receivables	Trade receivables	Other receivables
<b>Receivables not past due</b>	₩ 5,202,697	₩ 863,538	₩ 4,732,757	₩ 536,530
<b>Past due, but not impaired:</b>	286,864	41,014	159,787	44,716
Up to three months	282,558	35,556	159,348	27,297
Between 3–6 months	-	3,656	439	10,843
Over six months	4,306	1,802	-	6,576
<b>Impaired receivables</b>	-	-	1,234	54
	<u>₩ 5,489,561</u>	<u>₩ 904,552</u>	<u>₩ 4,893,778</u>	<u>₩ 581,300</u>

(4) Changes in the provision for impairment of trade and other receivables for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	2023		2022	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Beginning	₩ 1,234	₩ 54	₩ 11	₩ 54
Additions	-	-	481	-
Business combination	-	-	724	-
Write-off	(1,234)	(54)	-	-
Exchange differences	-	-	18	-
Ending	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 1,234</u>	<u>₩ 54</u>

(5) As of June 30, 2023, and December 31, 2022, the carrying amounts of trade and other receivables are approximation of their fair values.

(6) The Group transferred ₩355,480 million of trade receivables (as of December 31, 2022, ₩196,954 million of trade receivables) along with substantially all the risks and rewards of ownership. Therefore, the amount was derecognized on the discount date as of June 30, 2023.

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**8. OTHER FINANCIAL ASSETS AND LIABILITIES:**

(1) Details of other financial assets and liabilities as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
<b>Other financial assets:</b>		
Financial assets at FVOCI	₩ 279,742	₩ 245,585
Cash flow hedge	1,217	13,931
Financial assets at FVPL	<u>256,310</u>	<u>158,202</u>
	<u>₩ 537,269</u>	<u>₩ 417,718</u>
<b>Other financial liabilities:</b>		
Financial guarantee contracts	₩ 2,437	-
Cash flow hedge	4,387	2,143
Financial liabilities at FVPL	<u>-</u>	<u>2,522</u>
	<u>₩ 6,824</u>	<u>₩ 4,665</u>

(2) Details of changes in equity securities included in other financial assets for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	<u>2023</u>	<u>2022</u>
Beginning	₩ 245,585	₩ 120,767
Acquisitions/transfer	30,545	75,328
Valuation gain (before income tax deduction), other comprehensive income item	2,095	54,743
Valuation loss (before income tax deduction), profit or loss item	-	(5,818)
Others	<u>1,517</u>	<u>565</u>
Ending	<u>₩ 279,742</u>	<u>₩ 245,585</u>

The Group has entered into a put-option contract to secure the investment capital for its equity securities held in Volta Energy Solutions S.a.r.l. The major terms of the agreements are as follows:

- Exercise date: From three years after the acceptance date (initial investment date, January 27, 2021) to the following three years.
- Exercise price: The amount contributed, less any dividends received from the date of contribution up to the exercise.
- Other term: The option cannot be exercised once Volta Energy Solutions S.a.r.l is listed.

(3) No impairment losses on other financial assets were recognized for the six-month periods ended June 30, 2023 and 2022.

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**9. INVENTORIES:**

(1) Details of inventories as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	June 30, 2023			December 31, 2022		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Merchandise	₩ 222,098	₩ (14,971)	₩ 207,127	₩ 184,285	₩ (12,040)	₩ 172,245
Finished/semifinished products	4,148,224	(185,723)	3,962,501	4,393,089	(160,231)	4,232,858
Raw materials	1,994,229	(7,276)	1,986,953	1,630,837	(5,921)	1,624,916
Supplies	124,994	-	124,994	111,566	-	111,566
Materials in transit	939,814	-	939,814	854,044	-	854,044
	<u>₩ 7,429,359</u>	<u>₩ (207,970)</u>	<u>₩ 7,221,389</u>	<u>₩ 7,173,821</u>	<u>₩ (178,192)</u>	<u>₩ 6,995,629</u>

(2) The amount of inventories expensed as cost of sales for the three-month periods ended June 30, 2023 and 2022, was ₩11,492,663 million and ₩5,604,347 million, respectively.

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**10. INVESTMENTS IN ASSOCIATES AND JOINT VENTURES:**

(1) Changes in investments in associates and joint ventures for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	<b>June 30, 2023</b>					
	<b>Beginning</b>	<b>Acquisitions</b>	<b>Share of loss of associates and joint ventures</b>	<b>Share of other comprehensive income of associates and joint ventures</b>	<b>Impairment</b>	<b>Ending</b>
VINFAST LITHIUM BATTERY PACK LLC (*1)	₩ 2,428	₩ -	₩ (482)	₩ 65	₩ (2,011)	₩ -
Jiangxi VL Battery Co., Ltd (*2).	13,323	-	(1,317)	543	(12,549)	-
PT. HLI Green Power	187,945	-	(15,118)	7,859	-	180,686
Sama Aluminium (*3)	-	46,575	(1,375)	-	-	45,200
	<u>₩ 203,696</u>	<u>₩ 46,575</u>	<u>₩ (18,292)</u>	<u>₩ 8,467</u>	<u>₩ (14,560)</u>	<u>₩ 225,886</u>

(\*1) During the current year, the Group recognized the impairment due by deciding to transfer VINFAST LITHIUM BATTERY PACK LLC free of charge.

(\*2) During the current year, the Group recognized the impairment due by deciding to transfer Jiangxi VL Battery Co., Ltd free of charge.

(\*3) During the current period, the Group newly acquired 10.2% of the shares in Sama Aluminum for ₩46,575 million. Although the ownership is less than 20%, the arrangement ensures that the Group holds seats on the board of directors and voting rights, thus exerting significant influence over the entity. As a result, the entity is classified as an associate.

	<b>December 31, 2022</b>				
	<b>Beginning</b>	<b>Share of profit (loss) of associates and joint ventures</b>	<b>Share of other comprehensive income of associates and joint ventures</b>	<b>Ending</b>	
VINFAST LITHIUM BATTERY PACK LLC	₩ 3,769	₩ (1,611)	₩ 270	₩ 2,428	
Jiangxi VL Battery Co., Ltd.	20,310	(6,821)	(166)	13,323	
PT. HLI Green Power	201,488	(28,210)	14,667	187,945	
	<u>₩ 225,567</u>	<u>₩ (36,642)</u>	<u>₩ 14,771</u>	<u>₩ 203,696</u>	

(2) As of June 30, 2023, and December 31, 2022, the processes of adjusting the financial information to the carrying amounts of shares in associates and joint ventures are as follows (Korean won in millions):

	<b>June 30, 2023</b>					
	<b>Net assets</b>	<b>Group's percentage of ownership</b>	<b>Net asset value for shares</b>	<b>Overseas operations translation</b>	<b>Impairment</b>	<b>Carrying amount</b>
VINFAST LITHIUM BATTERY PACK LLC	₩ 5,739	35	₩ 2,009	₩ 2	₩ (2,011)	₩ -
Jiangxi VL Battery Co., Ltd.	12,800	34	4,352	8,197	(12,549)	-
PT. HLI Green Power	448,773	50	224,387	(43,701)	-	180,686
Sama Aluminium	256,732	10.2	26,187	19,013	-	45,200
	<u>₩ 724,044</u>		<u>₩ 256,935</u>	<u>₩ (16,489)</u>	<u>₩ (14,560)</u>	<u>₩ 225,886</u>

  

	<b>December 31, 2022</b>					
	<b>Net assets</b>	<b>Group's percentage of ownership</b>	<b>Net asset value for shares</b>	<b>Overseas operations translation</b>	<b>Carrying amount</b>	
VINFAST LITHIUM BATTERY PACK LLC	₩ 7,409	35	₩ 2,593	₩ (165)	₩ 2,428	
Jiangxi VL Battery Co., Ltd.	39,141	34	13,308	15	13,323	
PT. HLI Green Power	440,625	50	220,313	(32,368)	187,945	
	<u>₩ 487,175</u>		<u>₩ 236,214</u>	<u>₩ (32,518)</u>	<u>₩ 203,696</u>	

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**11. PROPERTY, PLANT AND EQUIPMENT:**

(1) Changes in property, plant and equipment for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
<b>Beginning</b>	₩	15,331,047	₩	11,050,777
Business combination		-		7,251
Acquisition/replacement		5,561,311		10,786,190
Disposal/replacement		(1,526,300)		(4,644,768)
Exchange differences		654,361		(128,791)
Depreciation		(1,004,481)		(1,739,612)
Impairment		(10,713)		-
<b>Ending</b>	<u>₩</u>	<u>19,005,225</u>	<u>₩</u>	<u>15,331,047</u>

(2) The current ending balance includes ₩7,599,616 million of construction in progress, and some of it will subsequently be transferred to intangible assets (for the year ended December 31, 2022, was ₩4,557,301 million).

(3) The Group capitalized ₩20,280 million of borrowing costs in relation to acquisition of property, plant and equipment (for the six-month period ended June 30, 2022, were ₩3,864 million). The capitalization rate of borrowings used to determine the amount of borrowing costs eligible for capitalization is 3.37% (for the six-month period ended June 30, 2022, was 1.21%).

(4) Line items, including depreciation, in the interim condensed consolidated statements of profit or loss for the three-month and six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
	<b>Three months</b>	<b>Six months</b>	<b>Three months</b>	<b>Six months</b>
Cost of sales	₩ 476,374	₩ 923,838	₩ 375,834	₩ 737,522
Selling and administrative expenses	43,237	80,643	31,063	62,817
	<u>₩ 519,611</u>	<u>₩ 1,004,481</u>	<u>₩ 406,897</u>	<u>₩ 800,339</u>

(5) Lease

① Amounts recognized in the interim condensed consolidated statements of financial position

Details of amounts recognized in the interim condensed consolidated statements of financial position in relation to lease for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	<b>June 30, 2023</b>		<b>December 31, 2022</b>	
<b>Right-of-use assets (*):</b>				
Real estate	₩	136,336	₩	132,480
Machinery		294		465
Vehicles		16,300		11,700
Tools		1,527		1,258
Equipment		339		457
	<u>₩</u>	<u>154,796</u>	<u>₩</u>	<u>146,360</u>

(\*) Included in 'Property, plant and equipment' in the interim condensed consolidated statements of financial position.

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Additions to the right-of-use assets for the six-month period ended June 30, 2023, are ₩37,832 million (for the six-month period ended June 30, 2022, were ₩34,337 million).

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
<b>Lease liabilities (*):</b>		
Current	₩ 51,166	₩ 39,944
Non-current	83,066	85,279
	<u>₩ 134,232</u>	<u>₩ 125,223</u>

(\*) Included in 'Borrowings' in the interim condensed consolidated statements of financial position.

② Amounts recognized in the interim condensed consolidated statements of profit or loss

Details of amounts recognized in the interim condensed consolidated statements of profit or loss in relation to lease for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<u>2023</u>		<u>2022</u>	
	<u>Three months</u>	<u>Six months</u>	<u>Three months</u>	<u>Six months</u>
<b>Depreciation of right-of-use assets:</b>				
Real estate	₩ 11,921	₩ 22,611	₩ 7,254	₩ 13,994
Machinery	104	208	76	148
Vehicles	2,279	4,533	1,972	3,375
Tools	219	437	54	108
Equipment	32	110	92	143
	<u>₩ 14,555</u>	<u>₩ 27,899</u>	<u>₩ 9,448</u>	<u>₩ 17,768</u>
Interest expense relating to lease liabilities (included in finance cost)	₩ 616	₩ 1,197	₩ 696	₩ 1,166
Expense relating to short-term leases (included in cost of goods sold and administrative expenses)	3,487	7,200	2,600	3,707
Expense relating to leases of low-value assets that are not short-term leases (included in cost of goods sold and administrative expenses)	1,970	3,565	1,307	2,600

Total cash outflow for leases for the six-month period ended June 30, 2023, is ₩38,591 million (for the six-month period ended June 30, 2022, was ₩25,964 million).

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**12. INTANGIBLE ASSETS:**

(1) Changes in intangible assets for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
<b>Beginning</b>	₩	642,090	₩	455,360
Business combination		-		1,503
Acquisition/replacement		116,742		291,633
Disposal/replacement		(2,091)		(7,522)
Exchange differences		8,926		(1,664)
Amortization		(62,555)		(97,220)
<b>Ending</b>	₩	703,112	₩	642,090

(2) Line items, including amortization of intangibles, are as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
	<b>Three months</b>	<b>Six months</b>	<b>Three months</b>	<b>Six months</b>
Cost of sales	₩ 8,359	₩ 16,037	₩ 8,380	₩ 16,113
Selling and administrative expenses	24,019	46,518	15,556	30,076
	₩ 32,378	₩ 62,555	₩ 23,936	₩ 46,189

(3) Greenhouse gas emission right

① The amount of allocated greenhouse gas emission rights for the domestic third plan period (2021-2025) is as follows (ton in thousands):

	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
Allocated emission rights	281	300	300	297	297

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- ② Based on the Korea Emission Trading Scheme, changes in greenhouse gas emission rights (included in other intangible assets) for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (ton in thousands and Korean won in millions):

	2023							
	2022		2023		2024		2025	
	Ton	Amount	Ton	Amount	Ton	Amount	Ton	Amount
Beginning /allocated	303	₩ -	300	₩ -	297	₩ -	297	₩ -
Purchase /sale	-	-	-	-	-	-	-	-
Borrowing /carried over	-	-	-	-	-	-	-	-
Government submission	-	-	-	-	-	-	-	-
Ending	<u>303</u>	<u>₩ -</u>	<u>300</u>	<u>₩ -</u>	<u>297</u>	<u>₩ -</u>	<u>297</u>	<u>₩ -</u>

	2022									
	2021		2022		2023		2024		2025	
	Ton	Amount	Ton	Amount	Ton	Amount	Ton	Amount	Ton	Amount
Beginning /allocated	281	₩ -	300	₩ -	300	₩ -	297	₩ -	297	₩ -
Purchase /sale	(2)	(20)	-	-	-	-	-	-	-	-
Borrowing /carried over	22	388	3	-	-	-	-	-	-	-
Government submission	(301)	(368)	-	-	-	-	-	-	-	-
Ending	<u>-</u>	<u>₩ -</u>	<u>303</u>	<u>₩ -</u>	<u>300</u>	<u>₩ -</u>	<u>297</u>	<u>₩ -</u>	<u>297</u>	<u>₩ -</u>

- ③ Based on the European Union Emission Trading System, changes in greenhouse gas emission rights (included in other intangible assets) for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (ton in thousands and Korean won in millions):

	2023		2022	
	Ton	Amount	Ton	Amount
Beginning	87	₩ 8,002	1	₩ 66
Purchase/sale	69	9,355	78	7,902
Government submission	(104)	(11,068)	-	-
Allocated	-	-	8	-
Foreign exchange difference	-	880	-	34
Ending	<u>52</u>	<u>₩ 7,169</u>	<u>87</u>	<u>₩ 8,002</u>

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**13. OTHER CURRENT AND NON-CURRENT ASSETS:**

Details of other current and other non-current assets as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
<b>Current:</b>		
Prepayments and prepaid expenses	₩ 236,839	₩ 310,004
Prepaid value-added tax	241,764	112,973
Others	<u>165,222</u>	<u>158,290</u>
	<u>₩ 643,825</u>	<u>₩ 581,267</u>
<b>Non-current:</b>		
Long-term prepayments and long-term prepaid expenses	₩ 173,780	₩ 133,914
Net defined benefit assets	183,601	222,519
Others	<u>73</u>	<u>69</u>
	<u>₩ 357,454</u>	<u>₩ 356,502</u>

**14. BORROWINGS:**

(1) Borrowings as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
<b>Current:</b>		
Short-term borrowings	₩ 1,672,899	₩ 1,243,992
Current portion of long-term borrowings	981,916	907,687
Current portion of debentures	-	675,078
Current lease liabilities	<u>51,166</u>	<u>39,944</u>
	<u>₩ 2,705,981</u>	<u>₩ 2,866,701</u>
<b>Non-current:</b>		
Long-term borrowings	₩ 4,048,283	₩ 3,697,317
Debentures	2,503,259	1,459,956
Non-current lease liabilities	<u>83,066</u>	<u>85,279</u>
	<u>6,634,608</u>	<u>5,242,552</u>
	<u>₩ 9,340,589</u>	<u>₩ 8,109,253</u>

(2) Details of borrowings as of June 30, 2023, and December 31, 2022, are as follows:

1) Short-term borrowings (Korean won in millions)

	<b>Bank</b>	<b>Latest maturity date</b>	<b>Interest rate (%)</b>		<u>June 30, 2023</u>	<u>December 31, 2022</u>
Bank loans	KB Kookmin and others	2024.06.20	2.50–6.44	₩	1,672,899	₩ 1,243,992

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2) Long-term borrowings (Korean won in millions)

		<b>June 30, 2023</b>						
		<b>Bank</b>	<b>Interest rate (%)</b>	<b>Latest maturity date</b>	<b>Amount</b>	<b>Current portion</b>	<b>Non-current portion</b>	
Borrowings in foreign currencies		Citibank	EUR: 3M EURIBOR + 0.62–0.70	2024.08.19	₩ 213,921	₩ 142,614	₩ 71,307	
		DBS	3M EURIBOR + 0.90	2026.03.10	142,614	-	142,614	
		DOE	3.65–3.78	2031.12.15	1,237,997	-	1,237,997	
		EBRD	6M EURIBOR + 0.62	2026.10.15	235,313	71,307	164,006	
		EIB	3M EURIBOR + 0.47	2027.03.31	608,490	152,124	456,366	
		ING	6M EURIBOR + 0.70	2023.11.23	99,830	99,830	-	
		KDB	USD: 3M LIBOR + 0.91	2025.06.25	150,151	97,598	52,553	
		KDB/Korea Exim/Nonghyup	EUR: 3M EURIBOR + 0.89–1.04	2027.04.26	1,442,920	-	1,442,920	
		KEB Hana	3M EURIBOR + 0.62	2024.02.15	285,229	285,229	-	
		MUFG	6M EURIBOR + 0.80	2024.01.18	71,307	71,307	-	
		SMBC	EUR: 0.48	2027.02.04	53,480	14,261	39,219	
		China: Agricultural Bank	LPR(1Y) - 0.70	2024.11.25	65,902	4,345	61,557	
		China	LPR(1Y) - 0.60–1.00	2026.03.21	200,251	43,301	156,950	
		China: Bank of Communications China	LPR(1Y) - 0.75–1.00	2025.07.14	120,941	-	120,941	
		Construction Bank	LPR(1Y)–1.00	2026.05.24	101,853	-	101,853	
						₩ 5,030,199	₩ 981,916	₩ 4,048,283
		<b>December 31, 2022</b>						
		<b>Bank</b>	<b>Interest rate (%)</b>	<b>Latest maturity date</b>	<b>Amount</b>	<b>Current portion</b>	<b>Non-current portion</b>	
Borrowings in foreign currencies		Citibank	EUR: 3M EURIBOR + 0.62–0.70	2024.08.20	₩ 203,096	₩ 67,699	₩ 135,397	
		DBS	6M EURIBOR + 0.60	2023.03.10	135,397	135,397	-	
		DOE	3.65	2031.12.15	705,620	-	705,620	
		EBRD	6M EURIBOR + 0.62	2026.10.15	257,255	67,698	189,557	
		EIB	3M EURIBOR + 0.47	2027.03.31	649,908	144,424	505,484	
		ING	6M EURIBOR + 0.70	2023.11.23	94,778	94,778	-	
		KDB	USD: 3M LIBOR + 0.91–0.93	2025.06.25	296,581	214,165	82,416	
		KDB/Korea Exim /Nonghyup	EUR: 3M EURIBOR + 0.89–1.04	2027.04.26	1,369,049	-	1,369,049	
		KEB Hana	3M EURIBOR + 0.62	2024.02.15	270,795	-	270,795	
		MUFG	6M EURIBOR + 0.80	2024.01.18	67,699	-	67,699	
		SMBC	EUR: 0.32–0.48	2027.02.04	192,941	148,937	44,004	
		China: Agricultural Bank	LPR(1Y) - 0.70	2024.11.25	68,222	4,355	63,867	
		China	LPR(1Y) - 0.60–1.00	2025.06.14	172,462	30,234	142,228	
		China: Bank of Communications	LPR(1Y) - 0.75–1.00	2025.07.14	121,201	-	121,201	
						₩ 4,605,004	₩ 907,687	₩ 3,697,317

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3) Debentures (USD in thousands, EUR in thousands and Korean won in millions)

		<b>June 30, 2023</b>					
	<b>Financial institution</b>	<b>Interest rate (%)</b>	<b>Latest maturity date</b>	<b>Amount</b>	<b>Current portion</b>	<b>Non-current portion</b>	
NH							
1st Debenture (non-guaranteed/public)	Investment & Securities Co., Ltd. and others	2.214	2026.03.13	₩ 200,000 ₩	- ₩	200,000	
2-1st Debenture (non-guaranteed/public)	KB Securities Co., Ltd. and others	4.097	2025.06.29	125,000	-	125,000	
2-2nd Debenture (non-guaranteed/public)	KB Securities Co., Ltd. and others	4.196	2026.06.29	370,000	-	370,000	
2-3rd Debenture (non-guaranteed/public)	KB Securities Co., Ltd. and others	4.298	2028.06.29	505,000	-	505,000	
USD foreign currency debenture (non-guaranteed)	Citibank and others	3.250	2024.10.15	656,400 (USD 500,000)	-	656,400	
USD foreign currency debenture (non-guaranteed)	Citibank and others	3.625	2029.04.15	656,400 (USD 500,000)	-	656,400	
Less: discount on debentures	-	-	-	(9,541)	-	(9,541)	
				₩ 2,503,259 ₩	-	₩ 2,503,259	
		<b>December 31, 2022</b>					
	<b>Financial institution</b>	<b>Interest rate (%)</b>	<b>Latest maturity date</b>	<b>Amount</b>	<b>Current portion</b>	<b>Non-current portion</b>	
NH							
1st Debenture (non-guaranteed/public)	Investment & Securities Co., Ltd. and others	2.214	2026.03.13	₩ 200,000 ₩	- ₩	200,000	
USD foreign currency debenture (non-guaranteed)	Citibank and others	3.250	2024.10.15	633,650 (USD 500,000)	-	633,650	
USD foreign currency debenture (non-guaranteed)	Citibank and others	3.625	2029.04.15	633,650 (USD 500,000)	-	633,650	
EUR foreign currency debenture (non-guaranteed)	Citibank and others	0.500	2023.04.15	675,600 (EUR 500,000)	675,600	-	
Less: discount on debentures	-	-	-	(7,866)	(522)	(7,344)	
				₩ 2,135,034 ₩	₩ 675,078 ₩	₩ 1,459,956 ₩	

4) Lease liabilities (Korean won in millions)

		<b>June 30, 2023</b>				
	<b>Interest rate (%)</b>	<b>Latest maturity date</b>	<b>Amount</b>	<b>Current portion</b>	<b>Non-current portion</b>	
Baeksan industry and others	0.67-5.01	2042.06.09	₩ 134,232 ₩	51,166 ₩	83,066	
		<b>December 31, 2022</b>				
	<b>Interest rate (%)</b>	<b>Latest maturity date</b>	<b>Amount</b>	<b>Current portion</b>	<b>Non-current portion</b>	
Baeksan industry and others	0.67-5.01	2042.06.09	₩ 125,223 ₩	39,944 ₩	85,279	

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**15. PROVISIONS:**

Changes in provisions for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	2023				
	Warranty(*1)	Greenhouse gas emission(*2)	Provision for restoration(*3)		Total
Beginning	₩ 1,482,900	₩ 8,712	₩ 4,118	₩	1,495,730
Provision transfer	507,024	7,352	1,618		515,994
Used	(233,326)	(11,068)	-		(244,394)
Ending	1,756,598	4,996	5,736		1,767,330
Less: current portion	(986,875)	(4,996)	-		(991,871)
	₩ 769,723	₩ -	₩ 5,736	₩	775,459

	2022				
	Warranty(*1)	Greenhouse gas emission(*2)	Provision for restoration(*3)	Legal claims	Total
Beginning	₩ 2,103,880	₩ 79	₩ 3,069	₩ 987	₩ 2,108,015
Business combination	4,999	-	-	-	4,999
Additions	630,174	12,493	1,049	-	643,716
Used	(1,256,153)	(3,860)	-	(987)	(1,261,000)
Ending	1,482,900	8,712	4,118	-	1,495,730
Less: current portion	(968,237)	(8,712)	-	-	(976,949)
	₩ 514,663	₩ -	₩ 4,118	₩ -	₩ 518,781

(\*1) Warranty provisions have been accrued for the estimated warranty costs to be incurred due to quality control, exchange and refunds with regard to products based on historical experience. In addition, provisions related to replacement costs due to ESS replacement costs and voluntary automotive battery recalls are included. The amount recognized as a provision shall be the best estimate of the expenditure required to settle the present obligation at the end of the reporting period.

(\*2) In relation to greenhouse gas emissions, the Group estimates the expected future costs of emissions exceeding the Group's emission rights for the year and recognizes them as provisions. Estimated emissions are 231 thousand tons for the six-month period ended June 30, 2023 (for the year ended December 31, 2022, were 417 thousand tons).

(\*3) The Group estimates the cost of restoring the leased office to its original state and records it as a provision.

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**16. NET DEFINED BENEFIT LIABILITIES (ASSETS):**

(1) Details of net defined benefit liabilities (assets) as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>		<u>December 31, 2022</u>	
Present value of defined benefit obligations (*1)	₩	594,274	₩	549,225
Fair value of plan assets		(777,485)		(771,244)
	₩	<u>(183,211)</u>	₩	<u>(222,019)</u>
Net defined benefit liabilities		390		499
Net defined benefit assets (*2)		<u>(183,601)</u>		<u>(222,518)</u>
	₩	<u>(183,211)</u>	₩	<u>(222,019)</u>

(\*1) The present value of retirement benefit obligations is the amount after deducting contributions to the National Pension Plan of ₩35 million as of June 30, 2023 (as of December 31, 2022, was ₩42 million).

(\*2) The ₩183,601 million of plan assets exceeding the defined benefit obligations of the Parent Company is included in other non-current assets as of June 30, 2023 (as of December 31, 2022, was ₩222,518 million).

(2) The amounts recognized in the interim condensed consolidated statements of income for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<u>2023</u>		<u>2022</u>	
	<u>Three months</u>	<u>Six months</u>	<u>Three months</u>	<u>Six months</u>
Current service cost	₩ 19,620	₩ 39,240	₩ 19,409	₩ 38,920
Interest cost	(3,004)	(6,008)	(3)	(5)
	<u>₩ 16,616</u>	<u>₩ 33,232</u>	<u>₩ 19,406</u>	<u>₩ 38,915</u>

(3) Retirement benefits recognized for defined contribution plan for the six-month period ended June 30, 2023, amounted to ₩907 million (the six-month period ended June 30, 2022, were ₩1,014 million).

(4) Retirement benefits recognized in the interim condensed consolidated statements of income for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<u>2023</u>		<u>2022</u>	
	<u>Three months</u>	<u>Six months</u>	<u>Three months</u>	<u>Six months</u>
Cost of sales	₩ 9,569	₩ 19,318	₩ 9,661	₩ 19,338
Selling and administrative expenses	7,453	14,821	10,296	20,591
	<u>₩ 17,022</u>	<u>₩ 34,139</u>	<u>₩ 19,957</u>	<u>₩ 39,929</u>

(5) Changes in the present value of defined benefit obligations for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	<u>2023</u>		<u>2022</u>	
Beginning	₩	549,225	₩	554,014
Transfer in		8,988		8,212
Transfer out		(442)		(2,991)
Current service cost		39,240		77,785
Interest expense		14,494		16,409
Remeasurements:				
Actuarial loss from change in financial assumption		-		(102,359)
Actuarial gain from change in demographic assumption		-		(3,256)
Actuarial gain due to the difference between the estimated and the actual		-		31,915
Others		-		792
Foreign currency conversion difference		1		(30)
Payments from plans		<u>(17,232)</u>		<u>(31,266)</u>
Ending	₩	<u>594,274</u>	₩	<u>549,225</u>

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(6) Changes in the fair value of plan assets for the six-month period ended June 30, 2023, and the year ended December 31, 2022, are as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
Beginning	₩	771,244	₩	554,142
Interest income		20,502		16,419
Remeasurements:				
Return on plan assets (excluding amounts included in interest income)		1,691		(4,390)
Contribution:				
Employer contribution to plan assets		474		235,213
Payments from plans		(15,701)		(29,120)
Administrative costs		(725)		(1,020)
Ending	₩	777,485	₩	771,244

(7) The actual return on plan assets for the six-month period ended June 30, 2023, was ₩22,193 million (the six-month period ended June 30, 2022, was ₩6,325 million).

(8) The significant actuarial assumptions as of June 30, 2023, and December 31, 2022, are as follows:

	<b>June 30, 2023</b>		<b>December 31, 2022</b>	
Discount rate		5.40%		5.40%
Salary growth rate		5.96%		5.96%

(9) The sensitivity analysis for changes in key actuarial assumptions as of June 30, 2023, is as follows (Korean won in millions):

	<b>Increase by 1.0%</b>		<b>Decrease by 1.0%</b>	
Discount rate:				
Increase (decrease) in defined benefit liabilities	₩	(66,391)	₩	79,305
Salary growth rate:				
Increase (decrease) in defined benefit liabilities		82,934		(70,191)

The above sensitivity analyses are based on a change in an assumption, while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. The sensitivity of the defined benefit obligation to changes in actuarial assumptions is calculated using the projected unit credit method, the same method applied when calculating the defined benefit obligations recognized in the interim condensed consolidated statements of financial position.

The methods and assumptions used for the sensitivity analysis are the same as those of previous period.

(10) Plan assets as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<b>June 30, 2023</b>		<b>December 31, 2022</b>	
	<b>Amount</b>	<b>Composition (%)</b>	<b>Amount</b>	<b>Composition (%)</b>
Insurance contracts with guaranteed yield	₩	777,485	₩	771,244
		100		100

Plan assets consist of guaranteed debt instruments and others which have no quoted market prices in an active market.

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**17. OTHER CURRENT AND NON-CURRENT LIABILITIES:**

Details of other current and non-current liabilities as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
<b>Current:</b>		
Advances from customers	₩ 103,050	₩ 131,482
Withholdings	28,926	52,642
Unearned revenues	76,707	68,225
Accrued expenses	<u>232,181</u>	<u>448,085</u>
	<u>₩ 440,864</u>	<u>₩ 700,434</u>
<b>Non-current:</b>		
Long-term accrued expenses	₩ 26,154	₩ 23,041
Long-term unearned revenues	102,095	215,645
Long-term advance received	<u>250,981</u>	<u>114,544</u>
	<u>₩ 379,230</u>	<u>₩ 353,230</u>

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**18. COMMITMENTS AND CONTINGENCIES:**

- (1) The Group is jointly liable with LG Chem Ltd. for liabilities recognized before the split-off date.
- (2) As of June 30, 2023, the Group has been guaranteed by Seoul Guarantee Insurance Company for the execution of contracts and others.
- (3) As of June 30, 2023, the Group has various specific line of credit agreements with several financial institutions as follows (Korean won in millions and foreign currencies in millions):

	Currency	June 30, 2023	
		The Parent Company	Certain subsidiaries
Limit of bank overdraft	KRW	8,700	-
	EUR	-	175
Limit of the letter of credit	USD	12	154
	CNY	-	1,819
Limit of discount of notes from export	USD	1,070	-
Limit of guaranteed payments in other foreign currency	USD	245	-
B2B purchase arrangements	KRW	125,000	-
	General loan agreements	KRW	350,000
Derivatives	USD	-	4,826
	CNY	-	11,080
	EUR	-	2,980
	KRW	-	30,000
Factoring arrangements	USD	663	656
	EUR	-	160
	KRW	150,000	-
	USD	-	610

- (4) As of June 30, 2023, the Group has entered into payment guarantee contracts of USD 98 million, EUR 1 million and KRW 7,755 million with financial institutions in relation to product warranty for certain installed products. Also, certain subsidiaries have entered into payment guarantee contracts of CNY 486 million with financial institutions in relation to custom clearance of imported raw materials.
- (5) As of June 30, 2023, the Group has entered into an arrangement with General Motors (“GM”) regarding joint investment in Ultium Cells LLC, whereby each party can sell its shares to third parties in eight years after the inception of the contract. In addition, if one party defaults, the other party has the right to purchase shares from the other party. In this regard, the Group has completed the government's approval process for the use of core technologies in accordance with the Industrial Technology Protection Act.
- (6) The Group has been sued in two class actions by consumers in relation to price fixing of mobile batteries and GM Bolt EV, and two cases are still in process as of June 30, 2023. The Group has also been sued in other 94 cases (amounted to KRW 3,425 million) and has filed four lawsuit cases (amounted to USD 90 million and KRW 162 million). The ultimate outcome of these pending cases cannot be determined at the reporting date.

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- (7) The Group has entered into a license agreement with LG Corp. to use trademarks on the products that the Group manufactures and sells, and on the services the Group provides in relation to its business.
- (8) As of June 30, 2023, the Group has entered into a joint venture agreement with Honda and has committed to invest USD 1,802 million. In addition, the Parent Company has decided to provide a payment guarantee of USD 450 million, determined by its proportionate ownership of the borrowed amount up to a maximum limit of USD 883 million.
- (9) As of June 30, 2023, the Group has entered into a joint venture agreement with Stellantis and has committed to invest USD 1,464 million.
- (10) As of June 30, 2023, the Group has entered into a joint venture agreement with HMG Global LLC and has committed to invest USD 1,108 million.
- (11) Capital expenditure arrangements that have not incurred as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
Property, plant and equipment	₩ 4,417,974	₩ 4,938,173

- (12) Investment commitments as of June 30, 2023, are as follows (Korean won in millions and USD in million):

	<u>Currency</u>	<u>Contractual amount</u>	<u>Total investments</u>	<u>Remaining amount</u>
BNZ (Beyond Net Zero) Fund	USD	75	24	51
Secondary Battery Growth Fund	KRW	6,700	4,690	2,010
KBE (Korea Battery ESG) Fund	KRW	75,000	33,732	41,268
BCM Global Battery Fund	KRW	30,000	5,979	24,021
Yonsei Technology Holdings IP Fund	KRW	3,000	1,020	1,980

- (13) As of June 30, 2023, and December 31, 2022, the details of the payment guarantee for the borrowings by the Group are as follows (Korean won in millions):

<u>Guarantor</u>	<u>Guarantee beneficiary</u>	<u>Financial institution</u>	<u>June 30, 2023</u>		<u>December 31, 2022</u>	
			<u>Loan amount(*1)</u>	<u>Credit limit(*2)</u>	<u>Loan amount(*1)</u>	<u>Credit limit(*2)</u>
LG Energy Solution Ltd.	PT. HLI Green Power	ANZ and others	₩ 177,228	₩ 466,700	₩ 88,711	₩ 450,525

(\*1) The amounts represent borrowed amount as of June 30, 2023, and December 31, 2022.

(\*2) The limits indicate the aggregate amount of payment guarantees.

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**19. SHARE CAPITAL:**

Changes in share capital and share premium for the six-month period ended June 30, 2023, are as follows (Korean won in millions and shares):

	<u>Ordinary shares</u>		<u>Share premium</u>
	<u>Number of shares</u>	<u>Share capital</u>	
January 1, 2023	234,000,000 ₩	117,000 ₩	17,589,721
June 30, 2023	234,000,000	117,000	17,589,721

**20. RETAINED EARNINGS:**

Details of retained earnings as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
Unappropriated retained earnings	₩ 2,088,801 ₩	1,154,518

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**21. OPERATING PROFITS:**

(1) Selling and administrative expenses for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
Revenue	₩ 8,773,487	₩ 17,520,604	₩ 5,070,561	₩ 9,412,909
Cost of sales	7,439,411	14,892,318	4,248,734	7,815,976
<b>Gross profit</b>	1,334,076	2,628,286	821,827	1,596,933
<b>Other operating income (*)</b>	110,916	211,210	-	-
<b>Selling and administrative expenses:</b>				
Wages and salaries	₩ 213,882	₩ 414,355	₩ 169,234	₩ 331,081
Retirement benefits	7,453	14,821	10,296	20,591
Employee benefits	54,772	100,439	38,016	68,688
Travel expenses	17,747	27,272	14,027	21,758
Water and utilities	14,955	33,501	8,758	20,736
Rental expenses	19,979	38,784	13,895	26,654
Commission expenses	134,800	249,396	98,076	178,428
Depreciation	44,736	83,625	32,508	65,696
Advertising expenses	6,708	10,347	4,960	8,549
Freight expenses	35,013	60,217	62,546	106,892
Training expenses	8,666	15,826	5,289	8,470
Amortization	24,019	46,518	15,556	30,076
Sample expenses	546	3,160	1,182	1,768
Development costs	52,673	89,279	33,037	58,063
Addition to warranty provisions	329,037	507,024	73,634	93,655
Others	19,407	51,167	45,205	101,367
	984,393	1,745,731	626,219	1,142,472
<b>Operating profits</b>	₩ 460,599	₩ 1,093,765	₩ 195,608	₩ 454,461

(\*) Under Advanced Manufacturing Production Tax Credit of the U.S. Inflation Reduction Act, effective January 1, 2023, tax credit can be received for battery cells/modules produced and sold in the U.S., and the amount is revenue expected to be received by the Group for the six-month period ended June 30, 2023.

(2) Consolidated revenue of the Group consists of sales of battery-related products and service sales, such as research and development, of which most of the sales are recognized at a time in relation to the sales of goods.

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**22. CLASSIFICATION OF EXPENSES BY NATURE:**

Cost of sales and selling and administrative expenses by nature for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
Changes in inventories of merchandise, finished goods, semifinished goods and work in process	₩ 207,934	₩ 235,475	₩ (1,138,807)	₩ (1,617,252)
Raw materials and consumables used	4,964,877	10,743,633	4,005,428	6,769,815
Purchase of merchandise	244,203	513,555	214,026	451,784
Employee benefit expenses	661,992	1,284,788	528,075	1,018,596
Advertising expenses	6,776	10,472	5,042	8,697
Freight expenses	41,746	73,107	68,832	118,157
Commission expenses	243,883	473,028	194,474	363,533
Depreciation and amortization	553,487	1,070,017	432,278	849,407
Rent expenses and usage fee	13,175	28,187	13,173	23,542
Transfers to provisions for service warranties	329,037	507,024	73,634	93,655
Other expenses	1,156,694	1,698,763	478,798	878,513
	<u>₩ 8,423,804</u>	<u>₩ 16,638,049</u>	<u>₩ 4,874,953</u>	<u>₩ 8,958,447</u>

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**23. EMPLOYEE BENEFIT EXPENSES:**

Details of employee benefit expenses for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
Wages and salaries	₩ 544,496	₩ 1,059,538	₩ 436,092	₩ 844,766
Retirement benefits: defined benefit plan	16,616	33,232	19,406	38,915
Retirement benefits: defined contribution plan	406	907	551	1,014
Others	100,474	191,111	72,026	133,901
	<u>₩ 661,992</u>	<u>₩ 1,284,788</u>	<u>₩ 528,075</u>	<u>₩ 1,018,596</u>

**24. FINANCE INCOME AND COSTS:**

Details of finance income and costs for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
<b>Finance income:</b>				
Interest income (*1)	₩ 37,326	₩ 81,860	₩ 38,877	₩ 71,232
Dividends income	99	99	-	-
Exchange differences	315,506	520,563	64,934	126,597
Gain on derivative instruments	259	39,704	50,979	64,778
	<u>₩ 353,190</u>	<u>₩ 642,226</u>	<u>₩ 154,790</u>	<u>₩ 262,607</u>
<b>Finance costs:</b>				
Interest expense (*2)	₩ 64,358	₩ 133,854	₩ 19,152	₩ 38,402
Exchange differences	149,566	343,716	153,529	269,779
Loss on disposal of trade receivables	3,591	5,224	116	236
Loss on derivative instruments	-	-	(1)	(1)
	<u>₩ 217,515</u>	<u>₩ 482,794</u>	<u>₩ 172,796</u>	<u>₩ 308,416</u>

(\*1) Details of interest income for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
Due from financial institutions	₩ 29,484	₩ 70,265	₩ 37,124	₩ 67,167
Other loans and receivables	7,842	11,595	1,753	4,065
	<u>₩ 37,326</u>	<u>₩ 81,860</u>	<u>₩ 38,877</u>	<u>₩ 71,232</u>

(\*2) Details of interest expense for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
Interest on financial institutions	₩ 63,364	₩ 120,305	₩ 6,257	₩ 12,803
Interest on financial lease liabilities	616	1,197	696	1,166
Interest on debentures	13,613	28,088	13,974	27,367
Other interest expenses	1,819	4,544	525	930
Capitalized interest for qualifying assets	(15,054)	(20,280)	(2,300)	(3,864)
	<u>₩ 64,358</u>	<u>₩ 133,854</u>	<u>₩ 19,152</u>	<u>₩ 38,402</u>

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**25. OTHER NON-OPERATING INCOME:**

Details of other non-operating income for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
Exchange differences	₩ 378,722	₩ 706,045	₩ 282,555	₩ 407,963
Gain on disposal of property, plant and equipment	531	736	343	588
Others	5,021	17,485	4,320	44,640
	₩ 384,274	₩ 724,266	₩ 287,218	₩ 453,191

**26. OTHER NON-OPERATING EXPENSES:**

Details of other non-operating expenses for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
Exchange differences	₩ 274,826	₩ 518,416	₩ 285,513	₩ 409,836
Loss on disposal of property, plant and equipment	26,603	41,894	15,719	17,299
Loss on disposal of intangible asset	107	342	103	250
Impairment of investments in associates and joint ventures	14,560	14,560	-	-
Donations	3,303	3,894	656	1,178
Others	6,840	22,998	25,315	27,959
	₩ 326,239	₩ 602,104	₩ 327,306	₩ 456,522

**27. INCOME TAX EXPENSE AND DEFERRED TAX:**

Income tax expense was recognized based on the best estimate of the weighted-average annual income tax rate for the entire fiscal year.

**28. EARNINGS PER SHARE:**

Basic earnings per share are calculated by dividing the earnings attributable to ordinary shares of the Parent Company by weighted-average number of shares issued.

Basic earnings per ordinary share for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023		2022	
	Three months	Six months	Three months	Six months
Profits attributable to ordinary shares of the Parent Company	₩ 432,443	₩ 933,038	₩ 94,160	₩ 320,783
Weighted-average number of ordinary shares outstanding	234,000,000	234,000,000	234,000,000	230,055,249
Basic earnings per ordinary share (in Korean won)	₩ 1,848	₩ 3,987	₩ 402	₩ 1,394

The Group has not issued any potential ordinary shares. Therefore, basic earnings per share are identical to diluted earnings per share.

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**29. RELATED-PARTY TRANSACTIONS:**

- (1) As of June 30, 2023, the parent company is LG Chem Ltd. (percentage of ownership: 81.84%), over which LG Corp. exercises a significant influence.
- (2) Details of related parties and others that have sales and other transactions with the Group or have receivable and payable balances, other than associates and joint ventures (see Note 10) as of June 30, 2023, are as follows:

<b>Related party</b>	<b>Related-party's subsidiary (Domestic)</b>	<b>Related-party's subsidiary (Overseas)</b>	<b>Details</b>
LG Chem Ltd.	HAENGBOKNURI CO., LTD. and others	LEYOU NEW ENERGY MATERIALS (WUXI) Co.,Ltd and others	Subsidiary of LG Chem Ltd.
D&O Co., Ltd.	D&O CM, Ltd. and others	D&O CM NANJING and others	
LG CNS Co., Ltd. LG Management Development Institute	Biz Tech I Co., Ltd. and others	LG CNS America Inc. and others	Subsidiary of LG Corp.
LG Display Co., Ltd.	Nanum nuri Co., Ltd.	LG Display (China) Co., Ltd. and others	
LG Electronics, Inc.	LG Innotek Co., Ltd. and others	LG Electronics Philippines, Inc. and others	
LG Household & Health Care Ltd.	Coca-Cola Beverage Co. and others	LG Household & Health Care Trading(Shanghai) Co., Ltd. and others	LG Enterprise group (*)
LG Uplus Corp.	LG HelloVision Corp. and others	LG UPLUS FUND I LLC. and others	
GIIR Inc.	HS AD Inc. and others	GIIR America Inc. and others	

(\*) Although these entities are not included within the scope of related parties under K-IFRS 1024, they belong to a large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

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(3) Transactions with related parties for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<b>2023</b>				
	<b>Sales and others</b>	<b>Purchase and others</b>			
		<b>Purchase of raw materials /merchandises</b>	<b>Acquisition of property, plant and equipment and intangibles</b>	<b>Interest expense</b>	<b>Others</b>
<b>Parent:</b>					
LG Chem Ltd.	₩ 4,580	₩ 1,869,329	₩ -	₩ 16	₩ 1,750
<b>Associates and joint ventures:</b>					
PT. HLI Green Power	23,081	-	-	-	-
VINFAST LITHIUM BATTERY PACK LLC	256	-	-	-	-
Sama Aluminium	-	14,072	-	-	-
<b>Other related parties:</b>					
LG Corp.	-	-	-	-	34,891
LG Chem America, Inc.	-	-	-	-	1
LG Chem (Taiwan), Ltd.	-	-	-	1	-
LG Chem (China) Investment Co., Ltd.	-	-	-	-	127
LG Chem Europe GmbH	-	-	-	-	17
HAENGBOKNURI CO., LTD.	5	-	-	-	560
LEYOU NEW ENERGY MATERIALS (WUXI) Co., Ltd.	-	1,188,658	-	-	-
Techwin, Inc	-	-	-	-	46
LG Chem Poland Sp. z o.o	-	122,966	-	-	-
LG Management Development Institute	11	-	-	-	16,558
D&O Co., Ltd. and its subsidiaries	42	-	8,718	-	1,841
LG CNS Co., Ltd. and its subsidiaries	24,845	101	249,805	-	74,079
Others	-	-	-	-	2,363
<b>Others:</b>					
LG Display Co., Ltd. and its subsidiaries	-	-	-	5	-
LG Electronics Inc. and its subsidiaries	1,026,901	172,144	379,858	-	25,773
Xi C&A and its subsidiaries	-	2,326	183,252	-	483
S&I Corporation	-	4,873	22,086	-	23,217
Others	23	-	398	17	1,416
	<u>₩ 1,079,744</u>	<u>₩ 3,374,469</u>	<u>₩ 844,117</u>	<u>₩ 39</u>	<u>₩ 183,122</u>

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	2022				
	Sales and others	Purchase and others			
		Purchase of raw materials /merchandises	Acquisition of property, plant and equipment and intangible assets	Interest expense	Others
<b>Parent:</b>					
LG Chem Ltd.	₩ 3,294	₩ 954,111	₩ 16,632	₩ 26	₩ 5,516
<b>Associates and joint ventures:</b>					
PT. HLI Green Power	22,981	-	-	-	-
VINFAST LITHIUM BATTERY PACK LLC	1,069	-	-	-	-
Jiangxi VL Battery Co., Ltd	28	-	-	-	-
<b>Other related parties:</b>					
LG Corp.	-	-	1,273	-	18,767
LG Chem America, Inc.	-	-	-	-	3
LG Chem (Taiwan), Ltd.	-	-	-	3	-
LG Chem (China) Investment Co., Ltd.	-	-	-	-	126
LG Chem Europe GmbH	-	-	-	-	17
HAENGBOKNURI CO., LTD.	7	-	-	-	562
LG Chem (Nanjing) Information & Electronics Materials Co., Ltd.	-	28	-	-	-
LEYOU NEW ENERGY MATERIALS (WUXI) Co., Ltd.	-	713,920	-	-	45
Techwin, Inc	-	-	100	-	27
LG Chem Hangzhou Advanced Materials Co., Ltd.	-	15,006	-	-	-
LG Chem Poland Sp. z o.o	-	61,814	-	-	3
LG Management Development Institute	-	-	-	-	9,874
D&O Co., Ltd. and its subsidiaries	40	-	6,740	-	1,055
LG CNS Co., Ltd. and its subsidiaries	9,186	48	123,435	-	46,820
Others	-	-	-	-	2,077
<b>Others:</b>					
LG Display Co., Ltd. and its subsidiaries	-	-	-	7	-
LG Electronics Inc., Ltd. and its subsidiaries	300,233	203,886	207,436	-	28,130
LX Holdings., Ltd. and its subsidiaries (*1)	262	58,703	79,157	9	146,434
Xi C&A (formerly S&I Construction) and its subsidiaries (*2)	-	-	116,254	-	-
S&I Corporation (*2)	-	2,668	6,784	-	12,487
Others	22	-	4	-	1,930
	<u>₩ 337,122</u>	<u>₩ 2,010,184</u>	<u>₩ 557,815</u>	<u>₩ 45</u>	<u>₩ 273,873</u>

(\*1) They have been excluded from the large enterprise group after their separation from LG Group during the six-month period ended June 30, 2022. The amount includes transactions before the separation.

(\*2) During the six-month period ended June 30, 2022, the entity was classified as an associate from a subsidiary of D&O Co., Ltd. due to the sale of its shares, and the amount includes the transactions before classification.

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(4) Balances of receivables and payables from related parties as of June 30, 2023 and December 31, 2022, are as follows (Korean won in millions):

	June 30, 2023							
	Receivables			Payables				
	Trade receivables	Other receivables	Total	Trade payables	Lease liabilities	Other payables	Total	
<b>Parent:</b>								
LG Chem Ltd.	₩	-	₩ 23,053	₩ 23,053	₩ 829,105	₩ 1,375	₩ 2,443	₩ 832,923
<b>Associates and joint ventures:</b>								
PT. HLI Green Power		-	2,538	2,538	-	-	65,112	65,112
VINFAST LITHIUM BATTERY PACK LLC.		-	-	-	-	-	458	458
Sama Aluminium		-	-	-	4,298	-	-	4,298
<b>Other related parties:</b>								
LG Corp.		-	-	-	-	-	9,451	9,451
LG Chem (Taiwan), Ltd.		-	-	-	-	16	40	56
LG Chem (China) Investment Co., Ltd.		-	-	-	-	-	39	39
LG Chem Europe GmbH		-	-	-	-	-	23	23
HAENGBOKNURI CO., LTD.		-	-	-	-	-	97	97
LEYOU NEW ENERGY MATERIALS(WUXI) Co., Ltd.		-	-	-	282,487	-	-	282,487
LG Chem Poland Sp. z o.o.		-	-	-	36,229	-	-	36,229
LG Management Development Institute		-	-	-	-	-	1,003	1,003
D&O Co., Ltd. and its subsidiaries		-	-	-	-	-	3,255	3,255
LG CNS Co., Ltd. and its subsidiaries		16,908	-	16,908	447	-	180,878	181,325
Others		-	-	-	-	-	264	264
<b>Others:</b>								
LG Display Co., Ltd. and its subsidiaries		-	-	-	-	372	19	391
LG Electronics Inc. and its subsidiaries (*)		411,454	1,481	412,935	85,241	-	172,830	258,071
Xi C&A and its subsidiaries		-	-	-	-	-	111,217	111,217
S&I Corporation		-	-	-	-	-	19,898	19,898
Others		-	559	559	-	1,342	3,808	5,150
	₩	428,362	₩ 27,631	₩ 455,993	₩ 1,237,807	₩ 3,105	₩ 570,835	₩ 1,811,747

(\*) Provisions for GM Bolt EV recall is not included in the balance of receivables and payables above.

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	December 31, 2022							
	Receivables			Payables				
	Trade receivables	Other receivables	Total	Trade payables	Lease liabilities	Other payables	Total	
<b>Parent:</b>								
LG Chem Ltd.	₩	-	₩ 23,163	₩ 23,163	₩ 571,271	₩ 1,650	₩ 2,904	₩ 575,825
<b>Associates and joint ventures:</b>								
PT. HLI Green Power		-	1,311	1,311	-	-	88,093	88,093
<b>Other related parties:</b>								
LG Corp.		-	46	46	-	-	18,727	18,727
LG Chem (Taiwan), Ltd.		-	-	-	-	106	41	147
LG Chem (China) Investment Co., Ltd.		-	-	-	-	-	48	48
LG Chem Europe GmbH		-	-	-	-	-	1	1
HAENGBOKNURI CO., LTD.		-	1	1	-	-	120	120
LEYOU NEW ENERGY MATERIALS(WUXI) Co., Ltd.		-	-	-	316,606	-	26	316,632
TECWIN Co., Ltd.		-	-	-	-	-	54	54
LG Chem Poland Sp. z o.o.		-	-	-	59,336	-	1	59,337
LG Management Development Institute		-	-	-	-	-	544	544
D&O Co., Ltd. and its subsidiaries		-	-	-	-	-	3,957	3,957
LG CNS Co., Ltd. and its subsidiaries		5,782	205	5,987	526	-	335,380	335,906
Others		-	-	-	-	-	363	363
<b>Others:</b>								
LG Display Co., Ltd. and its subsidiaries		-	-	-	-	454	17	471
LG Electronics Inc. and its subsidiaries (*1)	275,784	26,322	302,106	77,580	-	-	142,674	220,254
Xi C&A (formerly S&I Construction) and its subsidiaries (*2)	-	-	-	-	-	-	125,451	125,451
S&I Corporation (*2)	-	-	-	-	-	-	48,679	48,679
Others	-	561	561	-	-	-	3,930	3,930
	<u>₩ 281,566</u>	<u>₩ 51,609</u>	<u>₩ 333,175</u>	<u>₩ 1,025,319</u>	<u>₩ 2,210</u>	<u>₩ 771,010</u>	<u>₩ 1,798,539</u>	

(\*1) Provisions for GM Bolt EV recall is not included in the balance of receivables and payables above.

(\*2) During the year ended December 31, 2022, the entity was classified as an associate from a subsidiary of D&O Co., Ltd. due to the sale of its shares, and the amount includes the transactions before classification.

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(5) Fund transactions with related parties for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	2023							
	Dividends received	Dividends paid	Equity contribution in cash and others	Loan transactions		Borrowing transactions (*)		
				Loan	Repayment	Borrowing	Repayment	
<b>Parent:</b>								
LG Chem Ltd.	₩	- ₩	- ₩	- ₩	- ₩	- ₩	- ₩	258
<b>Associates and joint ventures:</b>								
Sama Aluminium		-	-	46,575	-	-	-	-
<b>Other related parties:</b>								
LG Chem (Taiwan), Ltd.		-	-	-	-	-	-	93
<b>Others:</b>								
LG DISPLAY AMERICA, INC		-	-	-	-	-	-	91
LG Household & Health Care		-	-	-	-	-	-	319
	₩	- ₩	- ₩	46,575 ₩	- ₩	- ₩	- ₩	761

(\*) The amounts represent lease liabilities that were recognized or repaid during the current period.

	2022							
	Dividends received	Dividends paid	Equity contribution in cash (capital reduction)	Loans transaction		Borrowings transaction (*)		
				Loans	Repayment	Borrowings	Repayment	
<b>Parent:</b>								
LG Chem Ltd.	₩	- ₩	- ₩	- ₩	- ₩	- ₩	- ₩	411
<b>Other related parties:</b>								
LG Chem (Taiwan), Ltd.		-	-	-	-	-	-	92
LG Chem (China) Investment Co., Ltd.		-	-	-	-	-	-	-
<b>Others:</b>								
LG DISPLAY AMERICA, INC		-	-	-	-	-	-	82
LX Pantos Poland sp. z.o.o		-	-	-	-	-	62	7
Pantos Logistics Mexico S.A. de C.V		-	-	-	-	-	2,384	320
LX PANTOS TURKEY LOJISTIK		-	-	-	-	-	337	41
	₩	- ₩	- ₩	- ₩	- ₩	- ₩	2,783 ₩	953

(\*) The amounts represent lease liabilities that were recognized or repaid during the previous period.

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(6) Compensation for key management of the Group for the six-month periods ended June 30, 2023 and 2022, is as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
Short-term employee benefits	₩	33,463	₩	17,699
Retirement benefits		4,400		2,075
	₩	37,863	₩	19,774

Key management includes directors (including non-executive) having duties and responsibilities over planning, operations and controlling of the Group's business activities.

(7) There are no provisions recognized for receivables from related parties as of June 30, 2023. Therefore, no bad debt expense was recognized for the six-month period ended June 30, 2023.

(8) As of June 30, 2023, the payment guarantees provided by the Group for related parties are disclosed in Note 18.

(9) During the six-month period ended June 30, 2022, LG Energy Solution (Nanjing) Co., Ltd., a subsidiary of the Group, has paid ₩604,437 million to LG Chem (China) Investment Co., Ltd. due to capital reduction through share repurchase.

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**30. CONSOLIDATED STATEMENTS OF CASH FLOWS:**

(1) Details of cash generated from operations for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
Profit before income tax:	₩	1,357,067	₩	388,441
Adjustments for:				
- Depreciation	₩	1,007,462	₩	803,218
- Amortization		62,555		46,189
- Retirement benefits		33,232		38,929
- Financial income		(474,969)		(317,086)
- Financial costs		307,928		368,193
- Foreign currency conversion differences		61,273		(8)
- Loss on valuations of inventories		29,778		20,713
- (Gain) loss on disposal of property, plant and equipment		(736)		588
- Loss on disposal of property, plant and equipment and intangible assets		42,236		17,549
- Impairment of investments in associates and joint ventures		14,560		-
- Contribution to provisions		514,376		145,424
- Other income		19,023		22,730
- Changes in inventories		102,005		(2,323,151)
- Changes in trade receivables		(319,412)		(548,157)
- Changes in other receivables		(228,656)		16,794
- Changes in other current assets		53,064		(156,258)
- Settlement of derivatives		(2,509)		-
- Changes in trade payables		327,387		1,596,609
- Changes in other payables		(511,626)		215,349
- Changes in other current liabilities		(388,692)		52,342
- Changes in provisions		(244,394)		(712,694)
- Changes in net defined benefit liabilities		7,265		3,125
- Other cash flows from operations		(1,435)		(59,375)
Cash generated from operations	₩	1,766,782	₩	(380,536)

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(2) Changes in liabilities arising from financial activities for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<b>2023</b>						
	<b>Cash flows from</b>		<b>Reclassification of</b>	<b>Amortization</b>	<b>Lease liabilities</b>	<b>Exchange differences and others</b>	<b>Ending</b>
	<b>Beginning</b>	<b>financing activities</b>					
Short-term borrowings	₩ 2,191,623	₩ 363,272	₩ 833,653	₩ -	₩ -	₩ (682,567)	₩ 2,705,981
Long-term borrowings	3,782,596	210,010	(833,653)	-	30,887	941,509	4,131,349
Debentures	2,135,034	268,914	-	1,430	-	97,881	2,503,259
	<u>₩ 8,109,253</u>	<u>₩ 842,196</u>	<u>₩ -</u>	<u>₩ 1,430</u>	<u>₩ 30,887</u>	<u>₩ 356,823</u>	<u>₩ 9,340,589</u>

  

	<b>2022</b>						
	<b>Cash flows from</b>		<b>Reclassification of</b>	<b>Amortization</b>	<b>Lease liabilities</b>	<b>Exchange differences and others</b>	<b>Ending</b>
	<b>Beginning</b>	<b>financing activities</b>					
Short-term borrowings	₩ 2,203,376	₩ (391,634)	₩ 575,625	₩ -	₩ -	₩ (400,633)	₩ 1,986,734
Long-term borrowings	2,720,009	616,333	(575,625)	-	24,197	511,339	3,296,253
Debentures	2,045,808	-	-	1,707	-	110,588	2,158,103
Accounts payable	585,928	(604,437)	-	-	-	18,509	-
	<u>₩ 7,555,121</u>	<u>₩ (379,738)</u>	<u>₩ -</u>	<u>₩ 1,707</u>	<u>₩ 24,197</u>	<u>₩ 239,803</u>	<u>₩ 7,441,090</u>

(3) Significant non-cash transactions for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<b>2023</b>	<b>2022</b>
Reclassification of construction in progress	₩ 1,348,783	₩ 2,074,319
Reclassification of machinery in transit	4,382	32,236
Reclassification of debentures into current portion	-	673,589
Changes in other payables related to acquisitions of property, plant and equipment and intangible assets	18,930	(7,722)

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**31. SEGMENT INFORMATION:**

(1) General information about the Group's reportable segments is as follows:

<b>Segment</b>	<b>Major products and services</b>
LG Energy solution (*)	Mobile batteries, Automotive batteries, ESS batteries and others

(\*) The Group has determined the reporting segment as a single reporting segment based on the performance evaluation reported to the board of directors, the chief operating decision maker.

(2) Segment information on revenue and profit for the six-month periods ended June 30, 2023 and 2022, is as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
	<b>Three months</b>	<b>Six months</b>	<b>Three months</b>	<b>Six months</b>
Total segment revenue	₩ 8,773,487	₩ 17,520,604	₩ 5,070,561	₩ 9,412,909
Revenue from external customers (*1)	8,773,487	17,520,604	5,070,561	9,412,909
Other operation income (*2)	110,916	211,210	-	-
Operating profit of reportable segment (*3)	460,599	1,093,765	195,608	454,461

(\*1) Revenue from external customers consists of sales of goods. Interest income and dividend income are included in finance income.

(\*2) Under Advanced Manufacturing Production Tax Credit of the U.S. Inflation Reduction Act, effective January 1, 2023, tax credit can be received for battery cells/modules produced and sold in the U.S., and the amount is revenue expected to be received by the Group for the six-month period ended June 30, 2023.

(\*3) Management assesses the performance of the operating segments based on a measurement of operating profit of segment.

(3) Segment information on assets and liabilities as of June 30, 2023, and December 31, 2022, is as follows (Korean won in millions):

	<b>June 30, 2023</b>			<b>December 31, 2022</b>		
	<b>Assets</b>	<b>Investments in associates and joint ventures</b>	<b>Liabilities</b>	<b>Assets</b>	<b>Investments in associates and joint ventures</b>	<b>Liabilities</b>
Reportable segment assets and liabilities	₩ 42,394,653	₩ 225,886	₩ 19,265,936	₩ 38,299,445	₩ 203,696	₩ 17,705,683

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(4) Sales for the six-month periods ended June 30, 2023 and 2022, and non-current assets as of June 30, 2023, and December 31, 2022, by geographical segments, are as follows (Korean won in millions):

	<b>Sales</b>				<b>Non-current assets (*1)</b>	
	<b>2023</b>		<b>2022</b>		<b>June 30, 2023</b>	<b>December 31, 2022</b>
	<b>Three months</b>	<b>Six months</b>	<b>Three months</b>	<b>Six months</b>		
Korea (*2)	₩ 758,866	₩ 1,426,742	₩ 391,100	₩ 778,311	₩ 3,702,677	₩ 3,243,244
China	1,702,588	3,328,022	1,255,250	2,433,431	4,109,353	3,786,273
Asia/Oceania	355,322	700,794	349,702	649,173	860	923
America	2,473,749	4,668,177	931,117	1,537,171	7,125,857	4,670,440
Europe	3,482,962	7,396,869	2,143,392	4,014,809	4,982,167	4,485,299
Africa	-	-	-	14	-	-
	<u>₩ 8,773,487</u>	<u>₩ 17,520,604</u>	<u>₩ 5,070,561</u>	<u>₩ 9,412,909</u>	<u>₩ 19,920,914</u>	<u>₩ 16,186,179</u>

(\*1) Represents aggregate amount of property, plant and equipment; intangible assets; and investment properties.

(\*2) Domestic sales include exports made through local letters of credit.

(5) For the six-month period ended June 30, 2023, revenues from single external customers, representing more than 1% of the Group's revenue, are ₩3,166,005 million, ₩2,506,628 million, and ₩2,028,479 million, respectively (the six-month period ended June 30, 2022, were ₩1,877,338 million, ₩570,695 million, and ₩273,802 million).

**32. ASSETS AND LIABILITIES RELATED TO CONTRACTS WITH CUSTOMERS:**

(1) Assets and liabilities related to contracts with customers as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	<b>June 30, 2023</b>	<b>December 31, 2022</b>
<b>Contract assets:</b>		
Due from customers	₩ 29,775	₩ 11,570
	<u>₩ 29,775</u>	<u>₩ 11,570</u>
<b>Contract liabilities:</b>		
Advances from customers received as part of the Group's main business activities	₩ 260,461	₩ 282,418
Expected customer incentives	952	2,497
Unearned revenue	92,995	112,240
Due to customers	3,379	14,315
	<u>₩ 357,787</u>	<u>₩ 411,470</u>

(2) Revenue recognized in relation to contract liabilities

Revenues recognized from the carried-forward contract liabilities for the six-month periods ended June 30, 2023 and 2022, are as follows (Korean won in millions):

	<b>2023</b>		<b>2022</b>	
	<b>Three months</b>	<b>Six months</b>	<b>Three months</b>	<b>Six months</b>
<b>Revenue recognized in the current period from the beginning contract liabilities:</b>				
Revenues in relation to advances from customers received as part of the Group's main business activities	₩ 2,380	₩ 48,234	₩ 38,055	₩ 66,909
Unearned revenue	12,984	25,014	11,517	24,848
	<u>₩ 15,364</u>	<u>₩ 73,248</u>	<u>₩ 49,572</u>	<u>₩ 91,757</u>

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the interim condensed consolidated financial statements**  
**As of June 30, 2023, and December 31, 2022, and**  
**for the three-month and six-month periods ended June 30, 2023 and 2022**

**33. INVESTMENT PROPERTIES:**

(1) Details of investment properties as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	June 30, 2023				December 31, 2022			
	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value
Buildings	₩ 292,893	₩ (78,837)	₩ (1,721)	₩ 212,335	₩ 290,437	₩ (75,916)	₩ (1,724)	₩ 212,797
Land	283	(6)	(35)	242	283	(3)	(35)	245
	<u>₩ 293,176</u>	<u>₩ (78,843)</u>	<u>₩ (1,756)</u>	<u>₩ 212,577</u>	<u>₩ 290,720</u>	<u>₩ (75,919)</u>	<u>₩ (1,759)</u>	<u>₩ 213,042</u>

(2) Changes in investment properties for the six-month period ended June 30, 2023, and for the year ended December 31, 2022, are as follows (Korean won in millions):

	2023		2022	
	Land	Building	Land	Building
Beginning	₩ 245	₩ 212,797	₩ 161	₩ 224,164
Acquisition/transfer	-	3,547	122	7,160
Disposal/transfer	-	(1,031)	-	(11,320)
Depreciation	(3)	(2,978)	(3)	(5,878)
Impairment	-	-	(35)	(1,329)
Ending	<u>₩ 242</u>	<u>₩ 212,335</u>	<u>₩ 245</u>	<u>₩ 212,797</u>

(3) The fair value of investment properties is measured either by independent professional appraisers with certified qualification or measured based on official appraised value of land and available information from recent transactions of similar properties, and it is classified as 'Level 3' of the fair value hierarchy. The fair value of investment properties as of June 30, 2023, is ₩245,247 million (as of December 31, 2022, was ₩245,471 million). Rental income from investment properties under operating lease for the six-month period ended June 30, 2023, is ₩4,377 million, and operating expenses incurred for investment properties that generated rental income (including maintenance and repair expenses) for the six-month period ended June 30, 2023, are ₩2,981 million.

(4) Operating lease

Investment properties are leased to tenants under operating leases with monthly rent payments. Where considered necessary to reduce credit risk, the Group may obtain bank guarantees for the term of the lease.

Although the Group is exposed to changes in the residual value at the end of the current leases, the Group typically enters into new operating leases and, therefore, will not immediately realize any reduction in residual value at the end of these leases. Expectations about the future residual values are reflected in the fair value of investment properties.

The future minimum lease payments expected to be received in relation to the above operating lease agreement for investment properties as of June 30, 2023, and December 31, 2022, are as follows (Korean won in millions):

	June 30, 2023	December 31, 2022
Less than one year	₩ 4,398	₩ 11,858
Between one year and two years	161	160
Between two years and five years	401	478
	<u>₩ 4,960</u>	<u>₩ 12,496</u>

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the interim condensed consolidated financial statements**  
**As of June 30, 2023, and December 31, 2022, and**  
**for the three-month and six-month periods ended June 30, 2023 and 2022**

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**34. BUSINESS COMBINATION:**

- (1) During the previous period, the Group acquired 100% shares of LG Energy Solution Vertech Inc., a US power storage battery installation service provider. As a result of the business combination, the Group expects to increase sales through expanded vertical integration by strengthening contact points with customers of power storage batteries.
- 1) The consideration transferred to LG Energy Solution Vertech Inc., and the values of assets and liabilities acquired at the acquisition date are as follows (Korean won in millions).
- 2) The bargain purchase difference of ₩30,673 million arising from the acquisition is recognized as other non-operating income item in the condensed consolidated statements of profit or loss.

	<u>Amount</u>
<b>Consideration</b>	
Cash and cash equivalents	₩ 16,168
	<u>₩ 16,168</u>
<b>Accumulated amount of acquired assets and assumed liabilities</b>	
Cash and cash equivalents	₩ 7,748
Trade receivables and other receivables (*)	56,333
Inventories	5,477
Property, plant and equipment	7,251
Intangible assets	1,503
Other assets	12,295
Trade payables and other payables	(25,859)
Other liabilities	(15,543)
Deferred tax liabilities	(2,364)
Fair value of acquired net assets	46,841
Goodwill (gain on bargain purchase)	<u>(30,673)</u>
	<u>₩ 16,168</u>

(\*) The fair value of trade receivables and other receivables is equal to the contractual amount.

**35. EVENT AFTER THE REPORTING PERIOD:**

In July 2023, the Group made a capital payment for a joint venture with Stellantis in Canada to respond to the growing demand for electric automotive batteries in the North American market.



## Independent Auditor's Report

English Translation of Independent Auditor's Report Originally Issued in Korean on March 8, 2023

To the Shareholders and the Board of Directors of  
LG Energy Solution, Ltd.:

### Audit Opinion

We have audited the consolidated financial statements of LG Energy Solution, Ltd. and its subsidiaries (the "Group"), which comprise the consolidated statement of financial position as of December 31, 2022, and the related consolidated statement of profit or loss, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows, for the year then ended, all expressed in Korean won, 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 financial position of the Group as of December 31, 2022, and its financial performance and its cash flows for the year then ended in accordance with Korean International Financial Reporting Standards ("K-IFRSs").

### Basis for Audit Opinion

We conducted our audit in accordance with the Korean Standards on Auditing ("KSAs"). 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 audit opinion.

### Key Audit Matters

The key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

#### GM Recall Warranty Provisions

##### 1) Description of Key Audit Matter

As stated in Note 4 of the consolidated financial statements, the warranty provisions for voluntary recalls related to the customers are estimated based on the number of vehicles subject to recall, the expected total repair costs, and the cost-sharing ratio, etc. General Motors Company ("GM"), the Group's customer, voluntarily decided to recall certain vehicles during the year ended December 31, 2021, and the estimated amount of the provision the Group has recognized for this recall is ₩236,883 million, as of December 31, 2022.

We have assessed this item as a Key Audit Matter considering that the recognized amount of the provision is material and the assessment process is judgmental.



## 2) How our audit addressed the Key Audit Matter

Our procedures included the following:

- Evaluate whether the Group's policies and internal controls for measuring and recognizing warranty provisions are effectively designed and operated.
- Perform the following procedures to assess the reasonableness of the key assumptions used by management:
  - Compare the underlying data with external and internal sources of information
  - Engage an auditor's expert to evaluate the reasonableness of the key assumptions and variables used by management
- Evaluate the competence and objectivity of the external expert engaged by management
- Independently recalculate the balance of the provision
- Assess the adequacy of the related footnote disclosures

### **Other Matters**

The consolidated financial statements of the Group for the year ended December 31, 2021, were audited by Ernst and Young, in accordance with KSAs, whose report dated on March 7, 2022 expressed an unqualified opinion.

### **Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements**

Management is responsible for the preparation of the accompanying consolidated financial statements in accordance with K-IFRS, and for such internal control as they determine 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 of the Group 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.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

### **Auditor's Responsibilities for the Audit of the Consolidated Financial Statements**

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements, as a whole, are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs 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 KSAs, 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 audit 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 the 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 are 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.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period, and are therefore, the key audit matters. We describe these matters in our auditor’s report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor’s report is Kiu Seok Seo.

March 8, 2023

This report is effective as of March 8, 2023, the auditor’s report date. Certain subsequent events or circumstances may have occurred between the auditor’s report date and the time the auditor’s report is read. Such events or circumstances could significantly affect the consolidated financial statements and may result in modifications to the auditor’s report.

## Independent auditor's report

### The Shareholders and Board of Directors LG Energy Solution, Ltd.

#### Opinion

We have audited the consolidated financial statements of LG Energy Solution, Ltd. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statement of financial position as of December 31, 2021 and the consolidated statement of income (loss) and consolidated statement of comprehensive income (loss), consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2021, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Korean International Financial Reporting Standards ("KIFRS").

#### 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.

#### Emphasis matter

Without qualifying our opinion, we draw attention to Note 36 to the consolidated financial statements. As described in Note 36 to the consolidated financial statements, the Group has recognized the lump-sum of ₩1,000,000 million (at the present value of ₩992,233 million) as operating income based on the agreement made with SK On Co., Ltd., which has spined-off from SK Innovation Co., Ltd., on May 15, 2021.

#### Other matter

The consolidated financial statements of the Group for the year ended December 31, 2020, were audited by Samil PricewaterhouseCoopers, whose report dated on March 11, 2021 expressed an unqualified opinion.

## 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.



March 7, 2022

This audit report is effective as of March 7, 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.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Consolidated statements of financial position**  
**As of December 31, 2022 and 2021**

(Korean won in millions)

	Notes		December 31, 2022	December 31, 2021
<b>Assets</b>				
<b>Current assets</b>				
Cash and cash equivalents	3,5,6	₩	5,937,967 ₩	1,282,880
Trade receivables	3,5,7,30		4,771,846	2,914,458
Other receivables	3,5,7,30		462,188	814,843
Other current financial assets	3,5,8		9,167	21,499
Prepaid income taxes			46,205	149,413
Other current assets	13		581,267	456,931
Inventories	9		6,995,629	3,895,803
			<u>18,804,269</u>	<u>9,535,827</u>
<b>Non-current assets</b>				
Trade receivables	3,5,7		120,698	67,055
Other receivables	3,5,7,30		119,058	92,271
Other non-current financial assets	3,5,8		408,551	193,820
Investments in associates and joint ventures	10,30,32		203,696	225,567
Deferred tax assets	27		2,100,492	1,855,198
Property, plant and equipment	11,18,32		15,331,047	11,050,777
Intangible assets	12,32		642,090	455,360
Investment properties	32,34		213,042	224,325
Other non-current assets	13,16		356,502	63,937
			<u>19,495,176</u>	<u>14,228,310</u>
<b>Total assets</b>		₩	<u>38,299,445 ₩</u>	<u>23,764,137</u>
<b>Liabilities</b>				
<b>Current liabilities</b>				
Trade payables	3,5,30	₩	3,841,766 ₩	2,177,736
Other payables	3,5,30		2,882,030	2,799,603
Borrowings	3,5,11,14,31		2,866,701	2,203,376
Provisions	15		976,949	1,527,476
Other current financial liabilities	3,5,8		3,923	-
Income tax payables			173,120	155,467
Other current liabilities	17,33		700,434	610,359
			<u>11,444,923</u>	<u>9,474,017</u>
<b>Non-current liabilities</b>				
Other payables	3,5,30		36,606	10,672
Borrowings	3,5,11,14,31		5,242,552	4,765,817
Other non-current financial liabilities	3,5,8		742	126
Provisions	15		518,781	580,539
Net defined benefit liabilities	16		499	202
Deferred tax liabilities	27		108,350	59,168
Other non-current liabilities	17,33		353,230	131,223
			<u>6,260,760</u>	<u>5,547,747</u>
<b>Total liabilities</b>			<u>17,705,683</u>	<u>15,021,764</u>
<b>Equity attributable to owners of the Parent Company</b>				
Share capital	19		117,000	100,000
Capital surplus	19		17,164,627	7,122,437
Accumulated other comprehensive income			296,070	406,092
Retained earnings	20		1,154,518	337,587
			<u>18,732,215</u>	<u>7,966,116</u>
<b>Non-controlling interest</b>	1		<u>1,861,547</u>	<u>776,257</u>
<b>Total equity</b>			<u>20,593,762</u>	<u>8,742,373</u>
<b>Total liabilities and equity</b>		₩	<u>38,299,445 ₩</u>	<u>23,764,137</u>

The accompanying notes are an integral part of the consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Consolidated statements of profit or loss**  
**For the years ended December 31, 2022 and 2021**

(Korean won in millions)

	<b>Notes</b>	<b>2022</b>	<b>2021</b>
<b>Revenue</b>	30,33,35	₩ 25,598,609	₩ 17,851,906
Cost of sales	22,23,30	<u>21,308,077</u>	<u>13,953,123</u>
<b>Gross profit</b>		4,290,532	3,898,783
Selling and administrative expenses	21,22,30	<u>3,076,813</u>	<u>3,130,313</u>
<b>Operating profit</b>		1,213,719	768,470
Finance income	5,24,31	385,537	339,996
Finance costs	5,24,31	519,021	295,258
Share of loss of associates and joint ventures	10	(36,641)	(11,556)
Other non-operating income	25	1,349,485	465,006
Other non-operating expenses	26	<u>1,397,765</u>	<u>489,474</u>
<b>Profit before income tax expense</b>		995,314	777,184
<b>Income tax expense</b>	27	<u>215,488</u>	<u>76,523</u>
<b>Profit from continuing operations</b>		779,826	700,661
Profit from discontinued operations		-	<u>229,207</u>
<b>Profit for the period</b>		<u>₩ 779,826</u>	<u>₩ 929,868</u>
<b>Profit for the period attributable to:</b>			
Owners of the Parent Company:			
Profit from continuing operations		₩ 767,236	₩ 607,343
Profit from discontinued operations		-	<u>185,176</u>
		767,236	792,519
Non-controlling interests:	1		
Profit from continuing operations		12,590	93,318
Profit from discontinued operations		-	<u>44,031</u>
		12,590	137,349
<b>Earnings per share attributable to the equity holders of the Parent Company (in Korean won)</b>	28		
Basic or diluted earnings per share		3,306	3,963
Basic or diluted earnings per share from continuing operations		3,306	3,036

The accompanying notes are an integral part of the consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Consolidated statements of comprehensive income**  
**For the years ended December 31, 2022 and 2021**

(Korean won in millions)

	<u>Notes</u>	<u>2022</u>	<u>2021</u>
<b>Profit for the year</b>	₩	779,826	₩ 929,868
<b>Other comprehensive income:</b>			
Items that will not be subsequently reclassified to profit or loss:			
Remeasurements of net defined benefit liabilities	16	68,543	(2,578)
Gain on valuation of financial assets at FVOCI	5	54,743	5,104
Income tax effect of other comprehensive income		<u>(36,145)</u>	<u>(701)</u>
		87,141	1,825
Items that may be subsequently reclassified to profit or loss:			
Exchange differences on translation of foreign operations		(96,207)	481,282
Gain (loss) on cash flow hedge	5	6,021	(18,082)
Share of other comprehensive income of associates and joint ventures	10	14,771	4,197
Income tax effect of other comprehensive income		<u>(39,175)</u>	<u>39,283</u>
		(114,590)	506,680
<b>Other comprehensive income (loss) for the period, net of tax</b>		<u>(27,449)</u>	<u>508,505</u>
<b>Total comprehensive income for the period, net of tax</b>	<u>₩</u>	<u>752,377</u>	<u>₩ 1,438,373</u>
<b>Total comprehensive income for the period attributable to:</b>			
Owners of the Parent Company	₩	706,907	₩ 1,195,531
Non-controlling interest		45,470	242,842

The accompanying notes are an integral part of the consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Consolidated statements of changes in equity**  
**For the years ended December 31, 2022 and 2021**  
(Korean won in millions)

	Attributable to the equity holders of the Parent Company							Total
	Share capital	Capital surplus	Accumulated other comprehensive income (loss)	Retained earnings (accumulated deficit)	Subtotal	Non-controlling interests		
<b>As of January 1, 2021</b>	₩ 100,000	₩ 7,231,468	₩ 1,205	₩ (453,058)	₩ 6,879,615	₩ 685,790	₩ 7,565,405	
Comprehensive income for the period:								
Profit for the period	-	-	-	792,519	792,519	137,349	929,868	
Remeasurements of net defined benefit liabilities	-	-	-	(1,874)	(1,874)	-	(1,874)	
Exchange differences on translation of foreign operations	-	-	408,608	-	408,608	105,500	514,108	
Gain on valuation of financial assets at FVOCI	-	-	3,700	-	3,700	-	3,700	
Loss on cash flow hedge	-	-	(11,618)	-	(11,618)	(7)	(11,625)	
Equity adjustments in equity method	-	-	4,197	-	4,197	-	4,197	
<b>Total comprehensive income for the period</b>	-	-	404,887	790,645	1,195,532	242,842	1,438,374	
<b>Transactions with owners of the Parent Company recognized directly in equity:</b>								
Others	-	(109,031)	-	-	(109,031)	(152,375)	(261,406)	
<b>As of December 31, 2021</b>	₩ 100,000	₩ 7,122,437	₩ 406,092	₩ 337,587	₩ 7,966,116	₩ 776,257	₩ 8,742,373	
<b>As of January 1, 2022</b>	₩ 100,000	₩ 7,122,437	₩ 406,092	₩ 337,587	₩ 7,966,116	₩ 776,257	₩ 8,742,373	
Comprehensive income (loss) for the period:								
Profit for the period	-	-	-	767,236	767,236	12,590	779,826	
Remeasurements of net defined benefit liabilities	-	-	-	49,695	49,695	-	49,695	
Exchange differences on translation of foreign operations	-	-	(166,655)	-	(166,655)	32,878	(133,777)	
Gain on valuation of financial assets at FVOCI	-	-	37,447	-	37,447	-	37,447	
Gain on cash flow hedge	-	-	4,415	-	4,415	-	4,415	
Equity adjustments in equity method	-	-	14,771	-	14,771	-	14,771	
<b>Total comprehensive income (loss) for the period</b>	-	-	(110,022)	816,931	706,909	45,468	752,377	
<b>Transactions with owners of the Parent Company recognized directly in equity:</b>								
Capital increase	17,000	10,079,370	-	-	10,096,370	1,039,822	11,136,192	
Others	-	(37,180)	-	-	(37,180)	-	(37,180)	
<b>As of December 31, 2022</b>	₩ 117,000	₩ 17,164,627	₩ 296,070	₩ 1,154,518	₩ 18,732,215	₩ 1,861,547	₩ 20,593,762	

The accompanying notes are an integral part of the consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Consolidated statements of cash flows**  
**For the years ended December 31, 2022 and 2021**

(Korean won in millions)

	<u>Notes</u>	<u>2022</u>	<u>2021</u>
<b>Cash flows from operating activities:</b>			
Cash generated from operations	31	₩ (260,840) ₩	1,575,868
Interest received		145,955	19,616
Interest paid		(120,323)	(71,210)
Income tax paid		(344,599)	(545,689)
<b>Net cash (used in) provided by operating activities</b>		(579,807)	978,585
<b>Cash flows from investing activities:</b>			
<b>Cash inflow from investing activities:</b>			
Decrease in other receivables		6,222,412	614,400
Decrease in other non-current receivables		12,636	86,206
Proceeds from disposal of investments in associates and joint ventures		-	28,377
Proceeds from disposal of property, plant and equipment		9,729	59,100
Proceeds from disposal of intangible assets		9,184	1
Proceeds from disposal of financial assets		1,287	-
Government grants received		205,516	348,545
Cash inflows from transfer of business		-	622,564
		6,460,764	1,759,193
<b>Cash outflow for investing activities:</b>			
Increase in other receivables		(6,245,586)	(11,755)
Increase in other non-current receivables		(26,453)	(83,165)
Acquisition of investments in associates and joint ventures		-	(209,132)
Acquisition of financial instruments		(141,637)	(116,285)
Acquisition of property, plant and equipment		(6,209,926)	(3,462,890)
Acquisition of intangible assets		(88,232)	(53,517)
Business combination		(8,286)	(570)
		(12,720,120)	(3,937,314)
<b>Net cash used in investing activities</b>		(6,259,356)	(2,178,121)
<b>Cash flows from financing activities:</b>			
<b>Cash inflow from financing activities:</b>			
Proceeds from borrowings and others		2,547,892	1,640,170
Capital increase		10,096,371	-
Paid-in capital by non-controlling interests		1,039,821	589,061
		13,684,084	2,229,231
<b>Cash outflow for financing activities:</b>			
Repayments of borrowings and others		(1,627,850)	(1,083,877)
Capital decrease of a subsidiary		(604,437)	(64,916)
Share repurchases by subsidiaries		-	(197,603)
Others		(37,180)	-
		(2,269,467)	(1,346,396)
<b>Net cash provided by financing activities</b>		11,414,617	882,835
Net increase (decrease) in cash and cash equivalents		4,575,454	(316,701)
Cash and cash equivalents at the beginning of the year		1,282,880	1,493,145
Effects of exchange rate changes on cash and cash equivalents		79,633	106,436
<b>Cash and cash equivalents at the end of the year</b>		<u>₩ 5,937,967</u> ₩	<u>1,282,880</u>

The accompanying notes are an integral part of the consolidated financial statements.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**As of and for the years ended December 31, 2022 and 2021**

**1. GENERAL:**

General information about LG Energy Solution, Ltd. (the “Company” or the “Parent Company”) and its 15 subsidiaries (collectively, the “Group”) is as follows:

**1.1 Company Information**

The Parent Company, a split-off of LG Chem Ltd.’s battery division, was incorporated on December 1, 2020.

As of December 31, 2022, the Company is engaged in the battery industry, with its manufacturing facilities located in Ochang.

The Company’s shares have been listed on the Korea Exchange since January 27, 2022, and the share capital is ₩117,000 million as of December 31, 2022. The largest shareholder of the Company is LG Chem Ltd., which holds 81.84% of the Company’s ordinary shares.

The Company is authorized to issue 800 million shares (₩500 per share) and has issued 234 million of ordinary shares as of December 31, 2022.

**1.2 Business Overview**

The Group is engaged in providing energy solution services.

The Group manufactures and supplies batteries ranging from IT and new application batteries for mobile phones and laptops to automotive batteries for electric vehicles and ESS batteries. Demand for mobile batteries for new applications, such as electric tools and other electrical devices, as well as traditional IT devices, is increasing recently, and the automotive battery business is also expected to expand rapidly due to increasing demand for batteries associated with enhanced environment regulation in developed countries. Demand for ESS is expanding with an increasing importance of efficient usage of electricity and generation of renewable energy.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**As of and for the years ended December 31, 2022 and 2021**

**1.3 Consolidated Subsidiaries and Investments in Associates and Joint Ventures**

	Ownership (%)		Location	Closing month	Business
	December 31, 2022	December 31, 2021			
<b>Subsidiaries:</b>					
LG Energy Solution (Nanjing) Co., Ltd.	100	100	China	December	Mobile battery manufacturing, sales, and others
LG Energy Solution Michigan Inc. (*1)	100	100	USA	December	Automotive battery research, development, and manufacturing
LG Energy Solution Battery (Nanjing) Co., Ltd.	100	100	China	December	Automotive battery manufacturing and sales
LG Energy Solution Wroclaw sp. z o.o.	100	100	Poland	December	Automotive battery manufacturing and sales
LG Energy Solution Australia Pty Ltd.	100	100	Australia	December	ESS battery sales
LG Energy Solution Technology (Nanjing) Co., Ltd.	100	100	China	December	Automotive battery manufacturing, sales, and others
Ultium Cells Holdings LLC (*2)	50	-	USA	December	Automotive battery manufacturing and sales
Ultium Cells LLC (*2)	50	50	USA	December	Automotive battery manufacturing and sales
LG Energy Solution Europe GmbH	100	100	Germany	December	ESS battery sales and others
LG Energy Solution (Taiwan) Ltd.	100	100	Taiwan	December	Mobile battery sales and others
Areum noori Co., Ltd.	100	100	Korea	December	Facility management and cleaning
LG Energy Solution Fund I LLC	100	100	USA	December	Investment in ventures
LG Energy Solution Vertech Inc. (*3)	100	-	USA	December	ESS installation service
ES America LLC (*4)	100	-	USA	December	Mobile battery manufacturing and sales
Baterias De Castilla, S.L. (*5)	100	-	Spain	December	Others
<b>Associates and joint ventures:</b>					
VINFAST LITHIUM BATTERY PACK LLC (*6)	35	35	Vietnam	December	Mobile battery manufacturing, sales, and others
Jiangxi VL Battery Co., Ltd.	34	34	China	December	Mobile battery manufacturing, sales, and others
PT. HLI Green Power (*7)	50	50	Indonesia	December	Automotive battery manufacturing and sales

(\*1) LG Energy Solution Michigan Inc. owns 50% of Ultium Cells LLC's shares.

(\*2) During the current year, the Group acquired 50% ownership of Ultium Cells Holdings LLC by contributing the entire stake it held in Ultium Cells LLC. The Group does not hold a majority ownership interest in Ultium Cells LLC or Ultium Cells Holdings LLC. According to the arrangement between shareholders, however, the Group holds the majority of voting rights in the decision-making process of the entity and has the ability to affect the variable returns by engaging in the entity's production and cost management. This implies that the Group exercises control over the entity.

(\*3) During the current year, the Group newly acquired 100% of LG Energy Solution Vertech Inc. for ₩16,168 million.

(\*4) ES America LLC was incorporated during the current year, and the Group acquired 100% of its shares for ₩66,590 million.

(\*5) During the current year, the Group newly acquired 100% of Baterias De Castilla, S.L. for ₩4 million.

(\*6) Although the Group holds a 35% ownership stake in VINFAST LITHIUM BATTERY PACK LLC, it has been classified as a joint venture as it meets the classification criteria of a joint venture, including the existence of contractual arrangements that effectively result in unanimous consent.

(\*7) As a company established under a joint arrangement in which the Group participated, the investee is structured as a separate vehicle over which the Group has rights to the net assets. Therefore, it is classified as a joint venture.

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
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**1.4 Summarized Financial Information of Subsidiaries, Associates and Joint Ventures**

Summarized financial information of subsidiaries, associates and joint ventures (before the elimination of intercompany transactions and adjustments for differences in accounting policies) is as follows (Korean won in millions):

	December 31, 2022			2022	
	Asset	Liability	Equity	Revenue	Net income (loss)
<b>Subsidiaries:</b>					
LG Energy Solution (Nanjing) Co., Ltd.	₩ 5,486,991	₩ 2,474,044	₩ 3,012,947	₩ 8,328,534	₩ 637,303
LG Energy Solution Michigan Inc.	3,573,800	1,031,654	2,542,146	2,457,871	27,822
LG Energy Solution Battery (Nanjing) Co., Ltd.	972,715	578,513	394,202	1,774,106	70,338
LG Energy Solution Wroclaw sp. z o.o.	9,845,139	7,654,235	2,190,904	10,767,806	438,249
LG Energy Solution Australia Pty Ltd.	12,903	10,926	1,977	25,306	248
LG Energy Solution Technology (Nanjing) Co., Ltd.	2,170,096	990,347	1,179,749	2,743,190	184,593
Ultium Cells Holdings LLC(*)	5,255,664	1,532,150	3,723,514	106,974	25,615
Ultium Cells LLC	5,255,664	1,532,150	3,723,514	106,974	25,615
LG Energy Solution Europe GmbH	252,708	205,366	47,342	280,244	7,003
LG Energy Solution (Taiwan) Ltd.	3,468	904	2,564	5,381	404
Areum noori Co., Ltd.	3,330	1,917	1,413	8,498	232
LG Energy Solution Fund I LLC	22,225	2	22,223	-	(1,470)
LG Energy Solution Vertech Inc.	89,508	46,357	43,151	60,224	(23,881)
ES America LLC	107,288	38,507	68,781	-	(962)
Baterias De Castilla, S.L.	4	-	4	-	-
<b>Associates and joint ventures:</b>					
VINFAST LITHIUM BATTERY PACK LLC	13,297	5,888	7,409	11,072	(3,809)
Jiangxi VL Battery Co., Ltd.	82,311	43,170	39,141	2,670	(19,851)
PT. HLI Green Power	667,930	227,305	440,625	-	(10,855)

(\*) The entity holds a 100% stake in Ultium Cells LLC and has presented financial information on a consolidated basis.

	December 31, 2021			2021	
	Asset	Liability	Equity	Revenue	Net income (loss)
<b>Subsidiaries:</b>					
LG Energy Solution (Nanjing) Co., Ltd.	₩ 4,776,953	₩ 2,307,876	₩ 2,467,077	₩ 4,404,238	₩ 565,809
LG Energy Solution Michigan Inc.	1,924,943	1,065,217	859,726	1,212,958	(48,693)
LG Energy Solution Battery (Nanjing) Co., Ltd.	1,115,896	707,952	407,944	1,318,955	94,824
LG Energy Solution Wroclaw sp. z o.o.	7,092,867	5,608,405	1,484,462	8,014,862	312,829
LG Energy Solution Australia Pty Ltd.	7,782	6,063	1,719	15,475	(69)
LG Energy Solution Technology (Nanjing) Co., Ltd.	2,031,679	1,000,656	1,031,023	1,330,482	129,374
Ultium Cells LLC	1,740,733	188,221	1,552,512	-	282
LG Energy Solution Europe GmbH	90,629	50,460	40,169	212,276	5,283
LG Energy Solution (Taiwan) Ltd.	3,429	1,183	2,246	4,499	249
Areum noori Co., Ltd.	2,199	1,018	1,181	5,518	681
LG Energy Solution Fund I LLC	21,438	3	21,435	-	(1,405)
<b>Associates and joint ventures:</b>					
VINFAST LITHIUM BATTERY PACK LLC	17,496	6,295	11,201	13,590	(1,570)
Jiangxi VL Battery Co., Ltd.	76,496	16,799	59,697	17,836	(10,245)
PT. HLI Green Power	404,131	1,156	402,975	-	(18,403)

**LG Energy Solution, Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**As of and for the years ended December 31, 2022 and 2021**

**1.5 Information of Subsidiaries Whose Non-Controlling Interests are Important to the Reporting Company**

(1) Ultium Cells Holdings LLC

- Percentage of ownership held by non-controlling interests and cumulative non-controlling interests (Korean won in millions)

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Percentage of ownership held by non-controlling interests	50.0%	50.0%
Cumulative non-controlling interests	₩ 1,861,547	₩ 776,257

- Net income and total comprehensive income attributable to non-controlling interests (Korean won in millions)

	<u>2022</u>	<u>2021</u>
Net income allocated to non-controlling interests	₩	12,500
Total comprehensive income allocated to non-controlling interests		45,380

- The consolidated statements of financial position of subsidiaries whose non-controlling interests are material to the Group (before the elimination of intercompany transactions) (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
<b>Total assets</b>		
Current assets	₩ 1,201,757	₩ 472,813
Non-current assets	4,053,907	1,267,920
	<u>₩ 5,255,664</u>	<u>₩ 1,740,733</u>
<b>Total liabilities</b>		
Current liabilities	₩ 713,966	₩ 188,200
Non-current liabilities	818,184	21
	<u>₩ 1,532,150</u>	<u>₩ 188,221</u>
<b>Total equity</b>	<u>₩ 3,723,514</u>	<u>₩ 1,552,512</u>

- The consolidated statements of comprehensive income of subsidiaries whose non-controlling interests are material to the Group (before the elimination of intercompany transactions) (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Revenue	₩ 106,974	₩ -
Operating profit	28,980	165
Net income	<u>₩ 25,615</u>	<u>₩ 282</u>

- The consolidated statements of cash flows of subsidiaries whose non-controlling interests are material to the Group (before the elimination of intercompany transactions) (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Cash flows from operating activities	₩ (334,638)	₩ (18,751)
Cash flows from investing activities	(2,480,393)	(803,651)
Cash flows from financing activities	2,794,084	1,177,783
Effects of exchange rate changes on cash and cash equivalents	65,286	28,230
Increase in cash and cash equivalents	44,339	383,611
Cash and cash equivalents at the beginning of the year	471,494	87,883
Cash and cash equivalents at the end of the year	<u>₩ 515,833</u>	<u>₩ 471,494</u>

**LG Energy Solution, Ltd. and its subsidiaries**  
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**1.6 Changes in Scope for Consolidation**

New subsidiaries included in the consolidated financial statements for the year ended December 31, 2022, are as follows:

	<u>Reason</u>
LG Energy Solution Vertech Inc.	Acquired during current reporting period
ES America, LLC	Incorporated during current reporting period
Baterias De Castilla, S.L.	Acquired during current reporting period
Ultium Cells Holdings LLC	Acquired during current reporting period

**2. BASIS OF CONSOLIDATION AND SIGNIFICANT ACCOUNTING POLICIES:**

**2.1 Basis of Consolidation**

The Group has prepared the consolidated financial statements in accordance with the Korean International Financial Reporting Standards (“K-IFRS”).

The principal accounting policies are set out below. Except for the effect of the amendments to K-IFRSs and new interpretations set out below, the principal accounting policies used to prepare the consolidated financial statements as of and for the year ended December 31, 2022, are consistent with the accounting policies used to prepare the consolidated financial statements as of and for the year ended December 31, 2021.

The accompanying consolidated financial statements have been prepared on the historical cost basis except for certain non-current assets and financial instruments that are measured at fair values, as explained in the accounting policies below. Historical cost is based on the fair values of the consideration given.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of K-IFRS 1102 Share-based payment, leasing transactions that are within the scope of K-IFRS 1116 Leases, and measurements that have some similarities to fair value, but are not fair value, such as net realizable value in K-IFRS 1002 Inventories or value in use in K-IFRS 1036 Impairment of Assets.

The directors have, at the time of approving the financial statements, a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future. Thus they continue to adopt the going concern basis of accounting in preparing the consolidated financial statements.

**2.2 Application of the Amended and Enacted Standards**

1) New and amended K-IFRSs and new interpretations that are effective for the current year

- K-IFRS 1103 *Business Combinations* - Reference to the Conceptual Framework (Amendment)

The amendments update K-IFRS 1103 so that it refers to the Conceptual Framework (2018) instead of the Framework (2007). They also add to K-IFRS 1103 a requirement that, for obligations within the scope of K-IFRS 1037, an acquirer applies K-IFRS 1037 to determine whether at the acquisition date a present obligation exists as a result of past events. For a levy that would be within the scope of K-IFRS 2121 Levies, the acquirer applies K-IFRS 2121 to determine whether the obligating event that gives rise to a liability to pay the levy has occurred by the acquisition date.

**LG Energy Solution, Ltd. and its subsidiaries**  
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Finally, the amendments add an explicit statement that an acquirer does not recognize contingent assets acquired in a business combination.

- K-IFRS 1016 *Property, Plant and Equipment* - Proceeds before Intended Use (Amendment)

The amendments prohibit deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced before that asset is available for use, i.e., proceeds while bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Consequently, an entity recognizes such sales proceeds and related costs in profit or loss. The entity measures the cost of those items in accordance with K-IFRS 1002 Inventories.

If not presented separately in the consolidated statements of comprehensive income, the financial statements shall disclose the amounts of proceeds and costs included in profit or loss that relate to items produced that are not an output of the entity's ordinary activities, and which line item(s) in the consolidated statements of comprehensive income include(s) such proceeds and cost.

The amendments are applied retrospectively, but only to items of property, plant and equipment that are brought to the location and condition necessary for them to be capable of operating in the manner intended by management on or after the beginning of the earliest period presented in the financial statements in which the entity first applies the amendments.

- K-IFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets* - Onerous Contracts - Cost of Fulfilling a Contract (Amendments)

The amendments specify that the 'cost of fulfilling' a contract comprises the 'costs that relate directly to the contract'. Costs that relate directly to a contract consist of both the incremental costs of fulfilling that contract (examples would be direct labor or materials) and an allocation of other costs that relate directly to fulfilling contracts (an example would be the allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract).

The amendments apply to contracts for which the entity has not yet fulfilled all its obligations at the beginning of the annual reporting period in which the entity first applies the amendments. Comparatives are not restated. Instead, the entity shall recognize the cumulative effect of initially applying the amendments as an adjustment to the opening balance of retained earnings or other component of equity, as appropriate, at the date of initial application.

- *Annual Improvements to K-IFRS Standards 2018–2020*

The annual improvements include amendments to four standards such as K-IFRS 1101 First-time Adoption of K-IFRS, K-IFRS 1109 Financial Instruments, K-IFRS 1116 Leases, and K-IFRS 1041 Agriculture.

① K-IFRS 1101 *First-Time Adoption of K-IFRSs*

The amendment provides additional relief to a subsidiary which becomes a first-time adopter later than its parent in respect of accounting for cumulative translation differences. As a result of the amendment, a subsidiary that uses the exemption in K-IFRS 1101 paragraph D16(1) can now also elect to measure cumulative translation differences for all foreign operations at the carrying amount that would be included in the parent's consolidated financial statements, based on the parent's date of transition to K-IFRSs, if no adjustments were made for consolidation procedures and for the effects of the business combination in which the parent acquired the subsidiary. A similar election is available to an associate or joint venture that uses the exemption in K-IFRS 1101 paragraph D16(1).

② K-IFRS 1109 *Financial Instruments*

The amendment clarifies that in applying the '10 per cent' test to assess whether to derecognize a financial liability, an entity includes only fees paid or received between the entity (the borrower) and the lender, including fees paid or received by either the entity or the lender on the other's behalf.

The amendment is applied prospectively to modifications and exchanges that occur on or after the date the entity first applies the amendment.

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③ K-IFRS 1116 *Leases*

The amendment removes the illustration of the reimbursement of leasehold improvements.

2) New and revised K-IFRSs in issue but not yet effective

At the date of authorization of these consolidated financial statements, the Group has not applied the following new and revised K-IFRSs that have been issued but are not yet effective:

- K-IFRS 1001 *Presentation of Financial Statements* - Classification of Liabilities as Current or Non-current (Amendments)

The amendments to K-IFRS 1001 affect only the presentation of liabilities as current or non-current in the consolidated statements of financial position and not the amount or timing of recognition of any asset, liability, income or expenses, or the information disclosed about those items.

The amendments clarify that the classification of liabilities as current or non-current is based on rights that are in existence at the end of the reporting period, specify that classification is unaffected by expectations about whether an entity will exercise its right to defer settlement of a liability, explain that rights are in existence if covenants are complied with at the end of the reporting period, and introduce a definition of ‘settlement’ to make clear that settlement refers to the transfer to the counterparty of cash, equity instruments, other assets or services.

The amendments are applied retrospectively for annual periods beginning on or after January 1, 2023, with early application permitted.

- K-IFRS 1001 *Presentation of Financial Statements and IFRS Practice Statement 2 Making Materiality Judgements* - Disclosure of Accounting Policies (Amendments)

The amendments change the requirements in K-IFRS 1001 with regard to the disclosure of accounting policies. The amendments replace all instances of the term ‘significant accounting policies’ with ‘material accounting policy information’. Accounting policy information is material if, when considered together with other information included in an entity’s financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements.

The supporting paragraphs in K-IFRS 1001 are also amended to clarify that accounting policy information that relates to immaterial transactions, other events or conditions is immaterial and need not be disclosed. Accounting policy information may be material because of the nature of the related transactions, other events or conditions, even if the amounts are immaterial. However, not all accounting policy information relating to material transactions, other events or conditions is itself material.

The board has also developed guidance and examples to explain and demonstrate the application of the ‘four-step materiality process’ described in IFRS Practice Statement 2.

The amendments to K-IFRS 1001 are effective for annual periods beginning on or after January 1, 2023, with earlier application permitted and are applied prospectively. The amendments to IFRS Practice Statement 2 do not contain an effective date or transition requirements.

- K-IFRS 1001 *Presentation of Financial Statements* - Disclosure of financial liabilities with condition to adjust exercise price (Amendment)

The amendments require disclosure of valuation gains or losses (limited to those recognized in the profit or loss) of the conversion options or warrants (or financial liabilities including them), if all or part of the financial instrument with exercise price that is adjusted depending on the issuer’s share price change is classified as financial liability as defined in paragraph 11 (2) of K-IFRS 1032.

The amendments are applied retrospectively for annual periods beginning on or after January 1, 2023, with early application permitted.

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- K-IFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* - Definition of Accounting Estimates (Amendments)

The amendments replace the definition of a change in accounting estimates with a definition of accounting estimates. Under the new definition, accounting estimates are “monetary amounts in financial statements that are subject to measurement uncertainty”.

The definition of a change in accounting estimates was deleted. However, the IASB retained the concept of changes in accounting estimates in the Standard with the following clarifications:

- A change in accounting estimate that results from new information or new developments is not the correction of an error
- The effects of a change in an input or a measurement technique used to develop an accounting estimate are changes in accounting estimates if they do not result from the correction of prior period errors

The amendments are effective for annual periods beginning on or after January 1, 2023 to changes in accounting policies and changes in accounting estimates that occur on or after the beginning of that period, with earlier application permitted.

- K-IFRS 1012 *Income Taxes* - Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments)

The amendments introduce a further exception from the initial recognition exemption. Under the amendments, an entity does not apply the initial recognition exemption for transactions that give rise to equal taxable and deductible temporary differences.

Depending on the applicable tax law, equal taxable and deductible temporary differences may arise on initial recognition of an asset and liability in a transaction that is not a business combination and affects neither accounting nor taxable profit. For example, this may arise upon recognition of a lease liability and the corresponding right-of-use asset applying K-IFRS 1116 at the commencement date of a lease.

Following the amendments to K-IFRS 1012, an entity is required to recognize the related deferred tax asset and liability, with the recognition of any deferred tax asset being subject to the recoverability criteria in K-IFRS 1012.

The board also adds an illustrative example to K-IFRS 1012 that explains how the amendments are applied. The amendments apply to transactions that occur on or after the beginning of the earliest comparative period presented. In addition, at the beginning of the earliest comparative period an entity recognizes:

- A deferred tax asset (to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized) and a deferred tax liability for all deductible and taxable temporary differences are associated with:
  - Right-of-use assets and lease liabilities
  - Decommissioning, restoration and similar liabilities and the corresponding amounts recognized as part of the cost of the related asset
- The cumulative effect of initially applying the amendments as an adjustment to the opening balance of retained earnings (or other component of equity, as appropriate) at that date.
- The amendments are effective for annual reporting periods beginning on or after January 1, 2023, with earlier application permitted.

The Group does not anticipate that the application of the enactment and amendments will have a significant impact on the Group’s consolidated financial statements.

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**2.3 Basis of Consolidation**

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company (and its subsidiaries) made up to December 31 each year. Control is achieved when the Company 1) has the power over the investee, 2) is exposed, or has rights, to variable returns from its involvement with the investee, and 3) has the ability to use its power to affect its returns. The Company reassesses 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 listed above.

When the Company has less than a majority of the voting rights of an investee, it considers that it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in an investee are sufficient to give it power, including:

- the size of the Company's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- potential voting rights held by the Company, other vote holders or other parties;
- rights arising from other contractual arrangements; and
- any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings.

Consolidation of a subsidiary begins when the Company obtains control over the subsidiary and ceases when the Company loses control of the subsidiary. Specifically, the results of subsidiaries acquired or disposed of during the year are included in profit or loss from the date the Company gains control until the date when the Company ceases to control the subsidiary. Profit or loss and each component of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of the subsidiaries is attributed to the owners of the Company 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 bring the accounting policies used into line with the Group's accounting policies.

All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between the members of the Group are eliminated on consolidation

Non-controlling interests in subsidiaries are identified separately from the Group's equity therein. Those interests of non-controlling shareholders that are present ownership interests entitling their holders to a proportionate share of net assets upon liquidation may initially be measured at 1) fair value or 2) at the non-controlling interests' proportionate share of the fair value of the acquiree's identifiable net assets. The choice of measurement is made on an acquisition-by-acquisition basis. Other non-controlling interests are initially measured at fair value. Subsequent to the acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. Total comprehensive income is attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's interests in subsidiaries that do not result in a loss of control are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to owners of the Company.

When the Group loses control of a subsidiary, a gain or loss on disposal is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), less liabilities of the subsidiary and any non-controlling interests. All amounts previously recognized in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e., reclassified to profit or loss or transferred to another category of equity as required/permitted by applicable K-IFRSs). The fair value of any investment retained in the former subsidiary at the date when control is lost is recognized as the fair value on initial recognition for subsequent accounting under K-IFRS 1109 Financial Instruments when applicable, or the cost on initial recognition of an investment in an associate or a joint venture.

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**2.4 Business Combination**

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interest issued by the Group in exchange for control of the acquiree. Acquisition-related costs are recognized in profit or loss as incurred.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognized at their fair value at the acquisition date, except that:

- deferred tax assets or liabilities and liabilities or assets related to employee benefit arrangements are recognized and measured in accordance with K-IFRS 1012 Income Taxes and K-IFRS 1019 Employee Benefits respectively;
- liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered into to replace share-based payment arrangements of the acquiree are measured in accordance with K-IFRS 1102 Share-based Payment at the acquisition date; and
- assets (or disposal groups) that are classified as held for sale in accordance with K-IFRS 1105 Non-current Assets Held for Sale and Discontinued Operations are measured in accordance with that standard.

Goodwill is measured as the excess of the sum of: a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree, and c) the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after reassessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of: a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree, and c) the fair value of the acquirer's previously held interest in the acquiree (if any); the excess is recognized immediately in profit or loss as a bargain purchase gain.

When the consideration transferred by the Group in a business combination includes contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination. Changes in fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement period adjustments are adjustments that arise from additional information obtained during the 'measurement period' (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

The subsequent accounting for changes in the fair value of the contingent consideration that do not qualify as measurement period adjustments depends on how the contingent consideration is classified. Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Other contingent consideration is remeasured to fair value at subsequent reporting dates with changes in fair value recognized in profit or loss.

When a business combination is achieved in stages, the Group's previously held interests (including joint operations) in the acquired entity are remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognized in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are reclassified to profit or loss, where such treatment would be appropriate if that interest were disposed of.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the amounts recognized as of that date.

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**2.5 Investments in associates and joint ventures**

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor an interest in a joint venture. 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 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.

The results and assets and liabilities of associates or 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. Under the equity method, an investment in an associate or a joint venture is recognized initially in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associate or joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

An investment in an associate or a joint venture is accounted for using the equity method from the date on which the investee becomes an associate or a joint venture. On acquisition of the investment in an associate or a joint venture, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee 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 and liabilities over the cost of the investment, after reassessment, is recognized immediately in profit or loss in the period in which the investment is acquired.

If there is objective evidence that the Group's net investment in an associate or joint venture is impaired, the requirements of K-IFRS 1036 are applied to determine whether it is necessary to recognize any impairment loss with respect to the Group's investment. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with K-IFRS 1036 as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognized is not allocated to any asset, including goodwill that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized in accordance with K-IFRS 1036 to the extent that the recoverable amount of the investment subsequently increases.

The Group discontinues the use of the equity method from the date when the investment ceases to be an associate or a joint venture. When the Group retains an interest in the former associate or a joint venture and the retained interest is a financial asset, the Group measures the retained interest at fair value at that date and the fair value is regarded as its fair value on initial recognition in accordance with K-IFRS 1109. The difference between the carrying amount of the associate or a joint venture at the date the equity method was discontinued, and the fair value of any retained interest and any proceeds from disposing of a part interest in the associate or a joint venture is included in the determination of the gain or loss on disposal of the associate or joint venture. In addition, the Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate on the same basis as would be required if that associate had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognized in other comprehensive income by that associate or joint venture would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as a reclassification adjustment) when the associate or joint venture is disposed of.

When the Group reduces its ownership interest in an associate or a joint venture, but the Group continues to use the equity method, the Group reclassifies to profit or loss the proportion of the gain or loss that had previously been recognized in other comprehensive income relating to that reduction in ownership interest if that gain or loss would be reclassified to profit or loss on the disposal of the related assets or liabilities.

When a group entity transacts with an associate or a joint venture of the Group, profits and losses resulting from the transactions with the associate or joint venture are recognized in the Group's consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

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The Group applies K-IFRS 1109, including the impairment requirements, to long-term interests in an associate or joint venture to which the equity method is not applied and which form part of the net investment in the investee. Furthermore, in applying K-IFRS 1109 to long-term interests, the Group does not take into account adjustments to their carrying amount required by K-IFRS 1028 (i.e., adjustments to the carrying amount of long-term interests arising from the allocation of losses of the investee or assessment of impairment in accordance with K-IFRS 1028).

## **2.6 Segment Reporting**

Information of each operating segment is reported in a manner consistent with the business segment reporting provided to the chief operating decision-maker (Note 32). The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments and the Group has identified the board of directors as the chief operating decision-maker.

## **2.7 Revenue Recognition**

### **(1) Identify performance obligation**

With regard to the contract of selling products to the customer, the Group identifies the services provided separately to the customer as a different performance obligation. When the Group makes a sales contract with the customer, the standard warranty period for each product and customer is set up considering the legal warranty period. Even though the standard warranty period has been expired, the warranties are recognized as a revenue and is identified as a consolidated performance obligation when the Group provides additional warranties for the quality of product or when the customer has an option to purchase additional warranties separately.

### **(2) A performance obligation satisfied at a point in time**

The revenue from the sale of goods is recognized at the time they are delivered to the customer. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the sales contract, the acceptance provisions have lapsed, or the group has objective evidence that all criteria for acceptance have been satisfied.

The goods are often sold with volume discounts, and it is the Group's policy to sell its products to the customer with a right of return. Accumulated experience is used to estimate for the discounts and the refund, and the volume discounts is calculated based on the periodical forecast sales. The warranty provision for the sales and refund is reasonably estimated and recognized properly.

### **(3) Providing ESS battery installation services**

The Group recognizes revenue from installation of ESS batteries based on the percentage of completion. In order to measure the services provided with reliability, the Group determines the progress using various methods depending on the nature of the transaction. These methods include examining the degree of work performed, the ratio of accumulated work performed to the total expected services, and the ratio of accumulated costs incurred to the total estimated costs, and others.

### **(4) Significant financing component**

As a practical expedient, the Group need not adjust the promised amount of consideration for the effects of a significant financing component as the period between when the entity transfers a promised good or service to a customer and when the customer pays for that good or service is generally one year or less.

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## **2.8 Lease**

### (1) The Group as lessee

The Group assesses whether a contract is or contains a lease, at inception of the contract. The Group recognizes a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low value assets (such as tablets and personal computers, small items of office furniture and telephones). For these leases, the Group recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the Group uses its incremental borrowing rate.

The incremental borrowing rate depends on the term, currency and start date of the lease and is determined based on a series of inputs, including: the risk-free rate based on government bond rates; a country-specific risk adjustment; a credit risk adjustment based on bond yields; and an entity-specific adjustment when the risk profile of the entity that enters into the lease is different to that of the Group and the lease does not benefit from a guarantee from the Group.

Lease payments included in the measurement of the lease liability comprise:

- Fixed lease payments (including in-substance fixed payments), less any lease incentives receivable;
- Variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- The amount expected to be payable by the lessee under residual value guarantees;
- The exercise price of purchase options, if the lessee is reasonably certain to exercise the options; and
- Payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The lease liability is presented as a separate line in the consolidated statements of financial position.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made.

The Group remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) whenever:

- The lease term has changed or there is a significant event or change in circumstances resulting in a change in the assessment of exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.
- The lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using an unchanged discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used).
- A lease contract is modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day, plus any lease incentives received and any initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses.

Whenever the Group incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognized and measured under K-IFRS 1037. To the extent that the costs relate to a right-of-use asset, the costs are included in the related right-of-use asset, unless those costs are incurred to produce inventories.

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Right-of-use assets are depreciated over the shorter period of lease term and useful life of the right-of-use asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Group expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset. The depreciation starts at the commencement date of the lease.

The right-of-use assets are included in the measurement of the Property, plant and equipment comprise.

The Group applies K-IFRS 1036 to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss as described in the 'Property, Plant and Equipment' policy.

Variable rents that do not depend on an index or rate are not included in the measurement the lease liability and the right-of-use asset. The related payments are recognized as an expense in the period in which the event or condition that triggers those payments occurs and are included in profit or loss.

As a practical expedient, K-IFRS 1116 permits a lessee not to separate non-lease components, and instead account for any lease and associated non-lease components as a single arrangement. The Group has not used this practical expedient. For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

(2) The Group as lessor

The Group enters into lease agreements as a lessor with respect to some of its investment properties. The Group also rents equipment to retailers necessary for the presentation and customer fitting and testing of footwear and equipment manufactured by the Group.

Leases for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

When the Group is an intermediate lessor, it accounts for the head lease and the sub-lease as two separate contracts. The sub-lease is classified as a finance or operating lease by reference to the right-of-use asset arising from the head lease.

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized on a straight-line basis over the lease term.

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Subsequent to initial recognition, the Group regularly reviews the estimated unguaranteed residual value and applies the impairment requirements of K-IFRS 1109, recognizing an allowance for expected credit losses on the lease receivables.

Finance lease income is calculated with reference to the gross carrying amount of the lease receivables, except for credit-impaired financial assets for which interest income is calculated with reference to their amortized cost (i.e., after a deduction of the loss allowance).

When a contract includes both lease and non-lease components, the Group applies K-IFRS 1115 to allocate the consideration under the contract to each component.

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**2.9 Foreign currencies**

The individual financial statements of each group entity 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 and financial position of each group entity are expressed in Korean won, which is the functional currency of the entity and the presentation currency for the consolidated financial statements.

In preparing the consolidated financial statements of the Group entities, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. 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 on transactions entered into in order to hedge certain foreign currency risks; and
- exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore forming part of the net investment in the foreign operation), which are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal or partial disposal of the net investment.

For the purpose of presenting consolidated financial statements, the assets and liabilities of the Company's foreign operations are expressed in Korean won using exchange rates prevailing at the end of the reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuated significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in a foreign exchange translation reserve (attributed to non-controlling interests as appropriate).

On the disposal of a foreign operation (i.e., a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, or partial disposal of an interest in a joint arrangement or an associate that includes a foreign operation of which the retained interest becomes a financial asset), all of the accumulated exchange differences in respect of that operation attributable to the owners of the Company are reclassified to profit or loss. Any exchange differences that have previously been attributed to non-controlling interests are derecognized, but they are not reclassified to profit or loss.

In the case of a partial disposal (i.e., no loss of control) of a subsidiary that includes a foreign operation, the proportionate share of accumulated exchange differences is re-attributed to non-controlling interests in equity and are not recognized in profit or loss. For all other partial disposals (i.e., partial disposals of associates or joint arrangements that do not result in the Group losing significant influence or joint control), the proportionate share of the accumulated exchange differences is reclassified to profit or loss.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate. Exchange differences arising are recognized in other comprehensive income.

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**2.10 Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

To the extent that variable rate borrowings are used to finance a qualifying asset and are hedged in an effective cash flow hedge of interest rate risk, the effective portion of the derivative is recognized in other comprehensive income and reclassified to profit or loss when the qualifying asset impacts profit or loss. To the extent that fixed rate borrowings are used to finance a qualifying asset and are hedged in an effective fair value hedge of interest rate risk, the capitalized borrowing costs reflect the hedged interest rate.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization.

All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

**2.11 Government grants**

Government grants are not recognized until there is a reasonable assurance that the Group 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, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

Government grants related to assets are presented in the consolidated statements of financial position by deducting the grant from the carrying amount of the asset (including property, plant and equipment). The related grant is recognized in profit or loss over the life of a depreciable asset as a reduced depreciation expense.

Government grants related to income are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate.

Government grants towards staff re-training costs are recognized as income over the periods necessary to match them with the related costs and are deducted in reporting the related expense.

**2.12 Retirement benefit costs and termination benefits**

Contributions to defined contribution retirement benefit plans are recognized as an expense when employees have rendered service entitling them to the contributions.

For defined benefit retirement benefit plans, the cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at the end of each annual reporting period. Remeasurements comprising actuarial gains and losses, the effect of the asset ceiling (if applicable) and the return on plan assets (excluding interest) are recognized immediately in the consolidated statement of financial position with a charge or credit to the consolidated statement of comprehensive income in the period in which they occur. Remeasurements recognized in the consolidated statement of comprehensive income are not reclassified. Past service cost is recognized in profit or loss when the plan amendment or curtailment occurs, or when the Group recognizes related restructuring costs or termination benefits, if earlier. Gains or losses on settlement of a defined benefit plan are recognized when the settlement occurs.

Net interest is calculated by applying a discount rate to the net defined benefit liability or asset. Defined benefit costs are split into three categories:

- service costs, which include current service cost, past service cost and gains and losses on curtailments and settlements;
- net interest expense or income; and
- remeasurements.

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Service costs and net interest expense or income are recognized within cost of sales and selling and administrative expenses, 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 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.

### **2.13 Taxation**

Income tax expense represents the sum of the tax currently payable and deferred tax.

#### **(1) Current tax**

The tax currently payable is based on taxable profit for the year. Taxable profit differs from net profit as reported in the consolidated statement of profit or loss and 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. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

A provision is recognized for those matters for which the tax determination is uncertain but it is considered probable that there will be a future outflow of funds to a tax authority. The provisions are measured at the best estimate of the amount expected to become payable. The assessment is based on the judgement of tax professionals within the Company supported by previous experience in respect of such activities and in certain cases based on specialist independent tax advice.

#### **(2) Deferred tax**

Deferred tax is the tax expected to be payable or recoverable on 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, and is accounted for using the liability method. 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 that 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 that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences, 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 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 offset 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, which 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.

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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 tax for the year

Current and deferred tax 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 tax 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.

**2.14 Property, plant and equipment**

Property, plant and equipment are stated at cost, less subsequent accumulated depreciation and accumulated impairment losses. The cost of an item of property, plant and equipment is directly attributable to their purchase or construction, which includes 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. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are recognized in the 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.

The Group does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful lives of the assets as follows:

	<u>Useful lives</u>
Buildings	25 – 50 years
Structures	6 – 50 years
Machinery	6 – 15 years
Others	1 – 12 years

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.

The Group reviews the depreciation method, the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting period. If expectations differ from previous estimates, the changes are 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.

**2.15 Investment property**

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 the 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.

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While land is not depreciated, all other investment property is depreciated based on the straight-line method.

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

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 the 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.

**2.16 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, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are carried at cost, less accumulated impairment losses.

	<u>Useful lives</u>
Software	6 years
Development costs	6 years
Industrial property rights	1 – 10 years
Others	6 – 10 years

(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.

An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognized if, and only if, all of the following conditions have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

Expenditure arising from development (or from the development phase of an internal project) is recognized as an intangible asset if, 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.

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(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.

(5) Patents and trademarks

Patents and trademarks are measured initially at purchase cost and are amortized on a straight-line basis over their estimated useful lives.

**2.17 Impairment of tangible and intangible assets other than goodwill**

At each reporting date, the Group reviews the carrying amounts of its tangible 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 (if any). 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, but 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.

**2.18 Inventories**

Inventories are stated at the lower of cost and net realizable value. Cost of inventories, except for those in in-transit measured using specific identification of their individual costs, 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.

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**2.19 Provisions**

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and 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 pre-tax 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 of time is recognized in profit or loss as borrowing cost.

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.

**2.20 Cash and cash equivalents**

In the consolidated statement of financial position, cash and bank balances comprise cash (i.e., cash on hand and demand deposits) and cash equivalents. Cash equivalents are short-term (generally with original maturity of three months or less), highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. Cash equivalents are held for the purpose of meeting short-term cash commitments rather than for investment or other purposes.

Bank balances for which use by the Group is subject to third party contractual restrictions are included as part of cash unless the restrictions result in a bank balance no longer meeting the definition of cash. If the contractual restrictions to use the cash extend beyond 12 months after the end of the reporting period, the related amounts are classified as non-current in the consolidated statements of financial position.

For the purposes of the consolidated statements of cash flows, cash and cash equivalents consist of cash and cash equivalents as defined above, net of outstanding bank overdrafts which are repayable on demand and form an integral part of the Group's cash management. Such overdrafts are presented as short-term borrowings in the consolidated statements of financial position.

**2.21 Financial Instruments**

Financial assets and financial liabilities are recognized in the Group's consolidated statements of financial position when the Group becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value, except for trade receivables that do not have significant financing components, which are measured at transaction price. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

**2.22 Financial assets**

All regular way purchases or sales of financial assets are recognized and derecognized on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

All recognized financial assets are measured subsequently in their entirety at either amortized cost or fair value, depending on the classification of the financial assets.

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(1) Classification of financial assets

Debt instruments that meet the following conditions are measured subsequently at amortized cost:

- the financial asset is held within a business model whose objective is 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.

Debt instruments that meet the following conditions are measured subsequently at fair value through other comprehensive income (FVOCI):

- the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling the financial assets; 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.

By default, all other financial assets are measured subsequently at fair value through profit or loss (FVPL).

Despite the foregoing, the Group may make the following irrevocable election / designation at initial recognition of a financial asset:

- the Group may irrevocably elect to present subsequent changes in fair value of an equity investment in other comprehensive income if certain criteria are met (see (1-3) below); and
- the Group may irrevocably designate a debt investment that meets the amortized cost or FVOCI criteria as measured at FVPL if doing so eliminates or significantly reduces an accounting mismatch (see (1-4) below).

1-1) Amortized cost and effective interest method

The effective interest method is a method of calculating the amortized cost of a debt instrument and of allocating interest income over the relevant period. For financial assets other than purchased or originated credit-impaired financial assets (i.e., assets that are credit-impaired on initial recognition), the effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts), excluding expected credit losses, through the expected life of the debt instrument, or, where appropriate, a shorter period, to the gross carrying amount of the debt instrument on initial recognition. For purchased or originated credit-impaired financial assets, a credit-adjusted effective interest rate is calculated by discounting the estimated future cash flows, including expected credit losses, to the amortized cost of the debt instrument on initial recognition.

The amortized cost of a financial asset is the amount at which the financial asset is measured at initial recognition minus the principal repayments, plus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss allowance. The gross carrying amount of a financial asset is the amortized cost of a financial asset before adjusting for any loss allowance.

Interest income is recognized using the effective interest method for debt instruments measured subsequently at amortized cost and at FVOCI. For financial assets other than purchased or originated credit-impaired financial assets, interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognized by applying the effective interest rate to the amortized cost of the financial asset. If, in subsequent reporting periods, the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognized by applying the effective interest rate to the gross carrying amount of the financial asset.

For purchased or originated credit-impaired financial assets, the Group recognizes interest income by applying the credit-adjusted effective interest rate to the amortized cost of the financial asset from initial recognition. The calculation does not revert to the gross basis even if the credit risk of the financial asset subsequently improves so that the financial asset is no longer credit-impaired.

Interest income is recognized in profit or loss and is included in the "finance income" line item.

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1-2) Debt instruments classified as at FVOCI

The corporate bonds held by the Group are classified as at FVOCI. Fair value is determined in the manner described in Note 50. The corporate bonds are initially measured at fair value plus transaction costs. Subsequently, changes in the carrying amount of these corporate bonds as a result of foreign exchange gains and losses, impairment gains or losses, and interest income calculated using the effective interest method are recognized in profit or loss. The amounts that are recognized in profit or loss are the same as the amounts that would have been recognized in profit or loss if these corporate bonds had been measured at amortized cost. All other changes in the carrying amount of these corporate bonds are recognized in other comprehensive income and accumulated under the heading of investments revaluation reserve. When these corporate bonds are derecognized, the cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss.

1-3) Equity instruments designated as at FVOCI

On initial recognition, the Group may make an irrevocable election (on an instrument-by-instrument basis) to designate investments in equity instruments as at FVOCI. Designation at FVOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVOCI are initially measured at fair value plus transaction costs. Subsequently, they are measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in the investments revaluation reserve. The cumulative gain or loss is not reclassified to profit or loss on disposal of the equity investments, instead, it is transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss in accordance with K-IFRS 1109, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the 'finance income' line item in profit or loss.

The Group designated all investments in equity instruments that are not held for trading as at FVOCI on initial recognition.

A financial asset is held for trading if:

- it has been acquired principally for the purpose of selling it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has evidence of a recent actual pattern of short-term profit-taking; or
- it is a derivative (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument).

1-4) Financial assets at FVPL

Financial assets that do not meet the criteria for being measured at amortized cost or FVOCI are measured at FVPL. Specifically:

- Investments in equity instruments are classified as at FVPL, unless the Group designates an equity investment that is neither held for trading nor a contingent consideration arising from a business combination as at FVOCI on initial recognition (see (1-3) above).
- Debt instruments that do not meet the amortized cost criteria or the FVOCI criteria (see (1-1) and (1-2) above) are classified as at FVPL. In addition, debt instruments that meet either the amortized cost criteria or the FVOCI criteria may be designated as at FVPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency (so called 'accounting mismatch') that would arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases. The Group has not designated any debt instruments as at FVPL.

Financial assets at FVPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss to the extent they are not part of a designated hedging relationship (see hedge accounting policy). The net gain or loss recognized in profit or loss includes interest earned on the financial asset and is included in the 'financial income' line item. Fair value is determined in the manner described in Note 3.

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(2) Foreign exchange gains and losses

The carrying amount of financial assets that are denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of each reporting period. Specifically;

- for financial assets measured at amortized cost that are not part of a designated hedging relationship, exchange differences are recognized in profit or loss in the ‘other non-operating income (expenses)’ line item;
- for debt instruments measured at FVOCI that are not part of a designated hedging relationship, exchange differences on the amortized cost of the debt instrument are recognized in profit or loss in the ‘other non-operating income (expenses)’ line item. As the foreign currency element recognized in profit or loss is the same as if it was measured at amortized cost, the residual foreign currency element based on the translation of the carrying amount (at fair value) is recognized in other comprehensive income in the investments revaluation reserve;
- for financial assets measured at FVPL that are not part of a designated hedging relationship, exchange differences are recognized in profit or loss in the ‘other non-operating income (expenses)’ line item as part of the fair value gain or loss; and
- for equity instruments measured at FVOCI, exchange differences are recognized in other comprehensive income in the investments revaluation reserve.

(3) Impairment of financial assets

The Group recognizes a loss allowance for expected credit losses on investments in debt instruments that are measured at amortized cost or at FVOCI, lease receivables, trade receivables and contract assets, as well as on financial guarantee contracts. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

The Group always recognizes lifetime ECL for trade receivables, contract assets and lease receivables. The expected credit losses on these financial assets are estimated using a provision matrix based on the Group’s historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current and the forecast direction of conditions at the reporting date, including time value of money where appropriate.

For all other financial instruments, the Group recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECL.

Lifetime ECL represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

(4) Measurement and recognition of expected credit losses

The measurement of expected credit losses is a function of the probability of default, loss given default (i.e., the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information as described above. As for the exposure at default, for financial assets, this is represented by the assets’ gross carrying amount at the reporting date; for financial guarantee contracts, the exposure includes the amount of guaranteed debt that has been drawn down as at the reporting date, together with any additional guaranteed amounts expected to be drawn down by the borrower in the future by default date determined based on historical trend, the Group’s understanding of the specific future financing needs of the debtors, and other relevant forward-looking information.

For financial assets, the expected credit loss is estimated as the difference between all contractual cash flows that are due to the Group in accordance with the contract and all the cash flows that the Group expects to receive, discounted at the original effective interest rate. For a lease receivable, the cash flows used for determining the expected credit losses is consistent with the cash flows used in measuring the lease receivable in accordance with K-IFRS 1116 Leases.

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For a financial guarantee contract, as the Group is required to make payments only in the event of a default by the debtor in accordance with the terms of the instrument that is guaranteed, the expected loss allowance is the expected payments to reimburse the holder for a credit loss that it incurs less any amounts that the Group expects to receive from the holder, the debtor or any other party.

If the Group has measured the loss allowance for a financial instrument at an amount equal to lifetime ECL in the previous reporting period, but determines at the current reporting date that the conditions for lifetime ECL are no longer met, the Group measures the loss allowance at an amount equal to 12-month ECL at the current reporting date, except for assets for which simplified approach was used.

The Group recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt instruments that are measured at FVOCI, for which the loss allowance is recognized in other comprehensive income and accumulated in the investment revaluation reserve, and does not reduce the carrying amount of the financial asset in the consolidated statement of financial position.

**(5) Derecognition of financial assets**

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On derecognition of a financial asset measured at amortized cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. In addition, on derecognition of an investment in a debt instrument classified as at FVOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is reclassified to profit or loss. In contrast, on derecognition of an investment in equity instrument, which the Group has elected on initial recognition to measure at FVOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is not reclassified to profit or loss, but is transferred to retained earnings.

**2.23 Financial liabilities and equity instruments**

**(1) Financial liabilities**

All financial liabilities are measured subsequently at amortized cost using the effective interest method or at FVPL. However, financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies, and financial guarantee contracts issued by the Group, are measured in accordance with the specific accounting policies set out below.

**1-1) Financial liabilities at FVPL**

Financial liabilities are classified as at FVPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVPL.

A financial liability is classified as held for trading if either:

- it has been acquired principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

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A financial liability other than a financial liability held for trading or contingent consideration of an acquirer in a business combination may be designated as at FVPL upon initial recognition if either:

- such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- it forms part of a contract containing one or more embedded derivatives, and K-IFRS 1109 permits the entire combined contract to be designated as at FVPL.

Financial liabilities at FVPL are measured at fair value, with any gains or losses arising on changes in fair value recognized in profit or loss to the extent that they are not part of a designated hedging relationship (see Hedge accounting policy). The net gain or loss recognized in profit or loss incorporates any interest paid on the financial liability and is included in the 'financial costs' line item in profit or loss.

However, for financial liabilities that are designated as at FVPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability is recognized in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. The remaining amount of change in the fair value of liability is recognized in profit or loss. Changes in fair value attributable to a financial liability's credit risk that are recognized in other comprehensive income are not subsequently reclassified to profit or loss; instead, they are transferred to retained earnings upon derecognition of the financial liability.

Gains or losses on financial guarantee contracts issued by the Group that are designated by the Group as at FVPL are recognized in profit or loss.

**1-2) Financial liabilities measured subsequently at amortized cost**

Financial liabilities that are not (i) contingent consideration of an acquirer in a business combination, (ii) held-for-trading, or (iii) designated as at FVPL, are measured subsequently at amortized cost using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial liability, or (where appropriate) a shorter period, to the amortized cost of a financial liability.

**(2) Financial guarantee contracts**

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due in accordance with the terms of a debt instruments.

Financial guarantee contract liabilities are measured initially at their fair values and, if not designated as at FVPL and do not arise from a transfer of an asset, are measured subsequently at the higher of:

- the amount of the loss allowance determined in accordance with K-IFRS 1109; and
- the amount recognized initially less, where appropriate, cumulative amortization recognized in accordance with the revenue recognition policies set out above.

**(3) Foreign exchange gains and losses**

For financial liabilities that are denominated in a foreign currency and are measured at amortized cost at the end of each reporting period, the foreign exchange gains and losses are determined based on the amortized cost of the instruments. These foreign exchange gains and losses are recognized in the 'other non-operating income (expenses)' line item in profit or loss for financial liabilities that are not part of a designated hedging relationship. For those which are designated as a hedging instrument for a hedge of foreign currency risk foreign exchange gains and losses are recognized in other comprehensive income and accumulated in a separate component of equity.

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The fair value of financial liabilities denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of the reporting period. For financial liabilities that are measured as at FVPL, the foreign exchange component forms part of the fair value gains or losses and is recognized in profit or loss for financial liabilities that are not part of a designated hedging relationship.

**(4) Derecognition of financial liabilities**

The Group derecognizes financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

When the Group exchanges with the existing lender one debt instrument into another one with the substantially different terms, such exchange is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Similarly, the Group accounts for substantial modification of terms of an existing liability or part of it as an extinguishment of the original financial liability and the recognition of a new liability. It is assumed that the terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective interest rate is at least 10 percent different from the discounted present value of the remaining cash flows of the original financial liability. If the modification is not substantial, the difference between: (1) the carrying amount of the liability before the modification; and (2) the present value of the cash flows after modification should be recognized in profit or loss as the modification gain or loss within other gains and losses.

**2.24 Derivative financial instruments**

The Group enters into a variety of derivative financial instruments to manage its exposure to interest rate and foreign exchange rate risks, including foreign exchange forward contracts, options and interest rate swaps.

Derivatives are recognized initially at fair value at the date a derivative contract is entered into and are subsequently remeasured to their fair value at each reporting date. The resulting gain or loss is recognized in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

A derivative with a positive fair value is recognized as a financial asset, whereas a derivative with a negative fair value is recognized as a financial liability. Derivatives are not offset in the consolidated financial statements, unless the Group has both legally enforceable right and intention to offset. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not due to be realized or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

**(1) Hedge accounting**

The Group designates certain derivatives as hedging instruments in respect of foreign currency risk and interest rate risk in fair value hedges, cash flow hedges, or hedges of net investments in foreign operations. Hedges of foreign exchange risk on firm commitments are accounted for as cash flow hedges.

At the inception of the hedge relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio, but the risk management objective for that designated hedging relationship remains the same, the Group adjusts the hedge ratio of the hedging relationship (i.e., rebalances the hedge) so that it meets the qualifying criteria again.

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The Group designates the full change in the fair value of a forward contract (i.e., including the forward elements) as the hedging instrument for all of its hedging relationships involving forward contracts.

The Group designates only the intrinsic value of options as hedging instrument as a means to hedge risks associated with forecast transactions. Time value changes (i.e., undesignated elements) are recognized in profit or loss in accordance with K-IFRS 1039 Financial Instruments: Recognition and Measurement. The changes in the fair value of the aligned time value of the option are recognized in other comprehensive income in accordance with K-IFRS 1109 Financial Instruments. The amount accumulated in equity is either reclassified to the profit or loss or derecognized from equity and included in the book value of non-financial items during when the hedged item affects the profit or loss.

The Group designates only the intrinsic value of option contracts as a hedging instrument, i.e., excluding the time value of the option. The changes in the fair value of the aligned time value of the option are recognized in other comprehensive income and accumulated in the cost of hedging reserve. If the hedged item is transaction-related, the time value is reclassified to profit or loss when the hedged item affects profit or loss. If the hedged item is time-period related, then the amount accumulated in the cost of hedging reserve is reclassified to profit or loss on a rational basis – the Group applies straight-line amortization. Those reclassified amounts are recognized in profit or loss in the same line as the hedged item. If the hedged item is a non-financial item, then the amount accumulated in the cost of hedging reserve is removed directly from equity and included in the initial carrying amount of the recognized non-financial item. Furthermore, if the Group expects that some or all of the loss accumulated in cost of hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

1-1) Fair value hedges

The fair value change on qualifying hedging instruments is recognized in profit or loss except when the hedging instrument hedges an equity instrument designated at FVOCI in which case it is recognized in other comprehensive income.

The carrying amount of a hedged item not already measured at fair value is adjusted for the fair value change attributable to the hedged risk with a corresponding entry in profit or loss. For debt instruments measured at FVOCI, the carrying amount is not adjusted as it is already at fair value, but the hedging gain or loss is recognized in profit or loss instead of other comprehensive income. When the hedged item is an equity instrument designated at FVOCI, the hedging gain or loss remains in other comprehensive income to match that of the hedging instrument.

Where hedging gains or losses are recognized in profit or loss, they are recognized in the same line as the hedged item.

The Group discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. The fair value adjustment to the carrying amount of the hedged item arising from the hedged risk is amortized to profit or loss from that date.

1-2) Cash flow hedges

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognized in other comprehensive income and accumulated under the heading of cash flow hedging reserve, limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss, and is included in the 'other gains and losses' line item.

Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss, in the same line as the recognized hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognized in other comprehensive income and accumulated in equity are removed from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability. This transfer does not affect other comprehensive income. Furthermore, if the Group expects that some or all of the loss accumulated in the cash flow hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

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The Group discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. Any gain or loss recognized in other comprehensive income and accumulated in cash flow hedge reserve at that time remains in equity and is reclassified to profit or loss when the forecast transaction occurs. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in cash flow hedge reserve is reclassified immediately to profit or loss.

**2.25 Accounting Treatment related to the Emission Rights Cap and Trade Scheme**

The Group classifies the emission rights as intangible assets. Emission rights allowances the government allocated free of charge are measured at nil, and emission rights allowances purchased are measured at cost, which the Group paid to purchase the allowances. If emission rights the government allocated free of charge are sufficient to settle the emission rights allowances allotted for vintage year, the emissions liabilities are measured at nil. However, for the emissions liabilities that exceed the allowances allocated free of charge, the shortfall is measured at best estimate at the end of the reporting period.

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**3. FINANCIAL RISK MANAGEMENT:**

**3.1 Financial Risk Factors**

The Group's activities expose it to a variety of financial risks: market, credit, and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the financial performance of the Group. The Group uses derivative financial instruments to hedge certain risk exposures.

Risk management is carried out by the Group's finance team under policies approved by the board of directors. The finance team identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units. The board of directors reviews and approves written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk and credit risk; use of derivative financial instruments and non-derivative financial instruments; and investment of excess liquidity.

(1) Market risk

1) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from foreign currency exposures, primarily with respect to the US dollar. Foreign exchange risk arises from forecast transactions and recognized assets and liabilities.

Management has set up a policy to require each company in the Group to manage its foreign exchange risk against its functional currency. The Group manages maximum loss for currency risk exposures within acceptable range using currency risk management model and employs who are exclusively responsible for currency risk management.

The Group has certain investments in foreign operations, whose net assets are exposed to foreign exchange risk. Currency exposure arising from the net assets of the Group's foreign operations is managed primarily through borrowings denominated in the relevant foreign currencies.

Monetary assets and liabilities denominated in foreign currencies as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>December 31, 2022</b>		<b>December 31, 2021</b>	
	<b>Assets</b>	<b>Liabilities</b>	<b>Assets</b>	<b>Liabilities</b>
USD	₩ 3,628,076	₩ 4,457,064	₩ 3,302,173	₩ 3,411,934
EUR	532,887	4,976,907	306,986	4,778,291
JPY	12,975	104,805	15,298	91,433
CNY and others	176,651	423	340,878	462

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With all other variables held constant as of December 31, 2022 and 2021, a hypothetical change in exchange rates by 10% would have increased (decreased) the Group's profit before income tax as follows (Korean won in millions):

	December 31, 2022		December 31, 2021	
	10% Increase	10% Decrease	10% Increase	10% Decrease
USD	₩ (82,899)	₩ 82,899	₩ (10,976)	₩ 10,976
EUR	(444,402)	444,402	(447,131)	447,131
JPY	(9,183)	9,183	(7,614)	7,614
CNY and others	17,623	(17,623)	34,042	(34,042)

The above sensitivity analysis has been performed for monetary assets and liabilities denominated in foreign currencies as of the end of the years.

As of December 31, 2022, the Group entered into foreign currency forward to hedge change in exchange rates and the details are as follows (Korean won in millions):

Currency forward (*1)	Contractor	Contract amount (in millions)	Contract exchange rate	Contract inception date	Contract maturity	Book amount	
						Assets	Liabilities
	Shinhan Bank	USD 500	1,135.60	2020.10.14	2024.10.15	₩ 47,695	₩ -
	KDB	USD 500	1,102.83	2020.11.24	2029.04.16	41,780	-
	ING	EUR 100	4.7800(*2)	2022.01.05	2023.01.05	-	2,522

(\*1) A derivative where hedge accounting is not applied.

(\*2) Represents EUR/PLN exchange rate.

## 2) Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from deposits and borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises through floating-rate deposits and borrowings. The objective of interest rate risk management lies in maximizing corporate value by minimizing uncertainty in interest rate fluctuations and net interest expense.

The Group adequately minimizes risks from interest rate fluctuations through various policies, such as sharing excess cash within the Group (internal cash sharing) to minimize external borrowings; avoiding high-rate borrowings; reforming capital structure; managing an appropriate ratio of fixed-rate borrowings and floating-rate borrowings; monitoring a fluctuation of domestic and foreign interest rates daily, weekly and monthly; establishing alternatives; and balancing floating-rate short-term borrowings with floating-rate deposits.

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The table below summarizes the impact of increases/decreases of interest rate on the Group's equity and profit after tax for the period. The analysis is based on the assumption that the interest rate has increased/decreased by 1% (100 bp) with all other variables held constant. (Korean won in millions)

	<b>Effect on profit and loss after tax</b>				<b>Impact on equity</b>			
	<b>December 31, 2022</b>		<b>December 31, 2021</b>		<b>December 31, 2022</b>		<b>December 31, 2021</b>	
Increase	₩	(39,531)	₩	(37,075)	₩	(39,531)	₩	(37,075)
Decrease		39,531		37,075		39,531		37,075

3) Price risk

The Group is exposed to price risks from equity instruments. As of December 31, 2022, the fair value of equity instruments is ₩250,085 million. With all other variables held constant, a price change in equity instruments by 10% would have changed the Company's equity by ₩18,284 million after tax.

(2) Credit risk

Credit risk arises from trade receivables that the Group holds, as well as financial assets at amortized cost or at fair value through other comprehensive income ("FVOCI").

The Group has established the following policies and procedures to manage credit risks:

To manage credit risks relating to trade receivables, the Group evaluates the credit rating of customers and determines the credit limit for each customer based on the information provided by credit rating agencies and other available financial information before commencing business with new customers. The credit risks relating to trade receivables are also mitigated by insurance contracts and collateral, as well as payment guarantees.

The Group has entered into export bond insurance contracts with Korea Trade Insurance Corporation to mitigate credit risks relating to export trade receivables to overseas customers. The Group is also provided with collateral by customers depending on their credit rating or payment guarantees from the customers' financial institutions, if necessary.

The Group has deposited its cash and cash equivalents and other long-term deposits in several financial institutions, such as Woori Bank and others. The Group has also entered into derivative contract with several financial institutions. The Group maintains business relationship with the financial institutions with high credit ratings evaluated by independent credit rating agencies and, accordingly, credit risks associated with these financial institutions are limited.

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1) Trade receivables

The Group applies the simplified approach in measuring expected credit losses, which uses lifetime expected provisions for trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The provisions for receivables as of December 31, 2022 and 2021, are as follows. Expected credit losses include forward-looking information (Korean won in millions):

	<u>Receivables not past due (*)</u>	<u>Receivables past due, but not impaired (*)</u>	<u>Receivables impaired (individually evaluated)</u>	<u>Total</u>
<b>December 31, 2022 (trade receivables)</b>				
Gross carrying amount	₩ 4,732,757	₩ 159,787	₩ 1,234	₩ 4,893,778
Expected loss rate	-	-	100.0%	0.03%
Provisions for receivables	-	-	1,234	1,234
<b>December 31, 2021 (trade receivables)</b>				
Gross carrying amount	₩ 2,794,006	₩ 187,518	-	₩ 2,981,524
Expected loss rate	0.00%	-	-	0.00%
Provisions for receivables	11	-	-	11

(\*) See Note 7.(3) for aging analysis.

Changes in the provisions for trade receivables for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Beginning	₩ 11	₩ 131
Addition(Reversal) of provisions recognized in profit or loss during the current year	481	(120)
Business combination	724	-
Exchange differences	18	-
Ending	<u>₩ 1,234</u>	<u>₩ 11</u>

As of December 31, 2022, the carrying amount of trade receivables representing the maximum exposure to credit risk amounts to ₩4,892,544 million (as of December 31, 2021, was ₩2,981,524 million).

2) Other financial assets at amortized cost

As of December 31, 2022, the provision for other financial assets at amortized cost was ₩54 million, the same as of December 31, 2021.

All of the financial assets at amortized cost are considered to have low credit risk, and the provisions recognized during the period were, therefore, limited to 12 months' expected losses.

3) Debt instruments measured at FVOCI

Debt instruments measured at FVOCI include trade receivables to be discounted. The provisions for these instruments are recognized in profit or loss and reduce the amount that would have been recognized in other comprehensive income as a loss on fair value change.

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(3) Liquidity risk

The finance team of the Group monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs, while maintaining the limit of unused borrowings at an appropriate level so that the Group does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. The Group's liquidity management policy considers the Group's financing plans, covenants on the debt contracts, target financial ratios and, if applicable, other external regulatory requirements on the currency and others.

1) The table below analyzes the Group's derivative financial liabilities into relevant maturity groupings based on the remaining period from the reporting period to the contractual maturity date. Cash flows presented below are gross cash flows before discount and include cash flows for interests (Korean won in millions):

	<b>December 31, 2022</b>			
	<b>Less than 1 year</b>	<b>Between 1 year–2 years</b>	<b>Between 2–5 years</b>	<b>More than 5 years</b>
<b>Non-derivative instruments:</b>				
Borrowings	₩ 2,969,739	₩ 1,686,157	₩ 2,726,522	₩ 1,253,521
Lease liabilities	41,833	38,891	48,955	539
Trade and other payables	6,723,796	32,613	3,043	950
	<u>9,735,368</u>	<u>1,757,661</u>	<u>2,778,520</u>	<u>1,255,010</u>
<b>Derivative instruments:</b>				
Currency forwards settled in gross:				
Inflows	(135,120)	(633,650)	-	(633,650)
Outflows	137,999	567,800	-	551,415
	2,879	(65,850)	-	(82,235)
	<u>₩ 9,738,247</u>	<u>₩ 1,691,811</u>	<u>₩ 2,778,520</u>	<u>₩ 1,172,775</u>
	<b>December 31, 2021</b>			
	<b>Less than 1 year</b>	<b>Between 1 year–2 years</b>	<b>Between 2–5 years</b>	<b>More than 5 years</b>
<b>Non-derivative instruments:</b>				
Borrowings	₩ 2,184,253	₩ 1,559,772	₩ 2,724,892	₩ 721,487
Lease liabilities	23,927	18,242	40,056	-
Trade and other payables	4,977,339	7,269	3,403	-
	<u>7,185,519</u>	<u>1,585,283</u>	<u>2,768,351</u>	<u>721,487</u>
<b>Derivative instruments:</b>				
Currency forwards settled in gross:				
Inflows	(1,026,890)	-	(592,750)	(592,750)
Outflows	1,030,088	-	567,800	551,415
	3,198	-	(24,950)	(41,335)
	<u>₩ 7,188,717</u>	<u>₩ 1,585,283</u>	<u>₩ 2,743,401</u>	<u>₩ 680,152</u>

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2) As of December 31, 2022, the Group has entered into swap contracts, to which cash flow hedge accounting is applied, to avoid fluctuations in the market price of raw materials (Korean won in millions).

	Purpose of the contracts	Hedged items	Financial institution	Maturity	December 31, 2022		December 31, 2021	
					Assets	Liabilities	Assets	Liabilities
Merchandise (raw materials) swap (*)	Cash flow hedge	Non-ferrous metal	Citibank, etc.	2025.12	₩ 13,931	₩ 2,143	₩ 5,911	₩ 126

(\*) Gain (loss) on the contracts that hedge the cash flow risk of forecast transaction is recognized in accumulated other comprehensive income and is fully effective portion for hedging.

3) Details of financial guaranteed contracts by maturity are as follows (Korean won in millions):

	December 31, 2022			
	Less than 1 year	Between 1 year-2 years	Between 2-5 years	More than 5 years
Financial guarantee contracts (*)	₩ 88,711	₩ -	₩ -	₩ -

(\*) The Group has provided financial guarantees for joint ventures. The amount represents the maximum amount that can be guaranteed as of December 31, 2022 (see Note 18).

### 3.2 Capital Risk Management

The Group's objectives for managing capital are to safeguard the Group's ability to continue to provide profits to shareholders and for other stakeholders as a going concern and to maintain an optimal capital structure to reduce the cost of capital.

Consistent with others in the industry, the Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings, less cash and cash equivalents. Total capital is calculated as 'equity' as shown in the consolidated statements of financial position, plus net debt.

The gearing ratio and debt-to-equity ratio as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	December 31, 2022	December 31, 2021
Total borrowings (Note 14) (A)	₩ 8,109,253	₩ 6,969,193
Less: cash and cash equivalents (B)	(5,937,967)	(1,282,880)
Net debt (C=A+B)	2,171,286	5,686,313
Total liabilities (D)	17,705,683	15,021,764
Total equity (E)	20,593,762	8,742,373
Total capital (F=C+E)	22,765,048	14,428,686
Gearing ratio (C/F)	9.5%	39.4%
Debt-to-equity ratio (D/E)	86.0%	171.8%

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**3.3 Fair Value Estimation**

(1) The carrying amount and fair value of financial instruments by category as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>December 31, 2022</b>		<b>December 31, 2021</b>	
	<b>Carrying amount</b>	<b>Fair value</b>	<b>Carrying amount</b>	<b>Fair value</b>
<b>Financial assets (current):</b>				
Cash and cash equivalents	₩ 5,937,967	(*)	₩ 1,282,880	(*)
Trade receivables	4,771,846	(*)	2,914,458	(*)
Other receivables (excluding due from financial institutions)	462,188	(*)	813,776	(*)
Due from financial institutions	-	-	1,067	(*)
Current derivative financial assets	9,167	9,167	4,605	4,605
Current derivative financial assets (currency forward)	-	-	16,894	16,894
<b>Financial assets (non-current):</b>				
Due from financial institutions	70,997	(*)	60,911	(*)
Trade receivables	120,698	(*)	67,055	(*)
Other receivables (excluding due from financial institutions)	48,061	(*)	31,360	(*)
Other non-current financial assets (measured at fair value)				
Marketable financial assets	50,626	50,626	14,063	14,063
Non-marketable financial assets	259,127	259,127	107,374	107,374
Non-current derivative financial assets	9,323	9,323	17,465	17,465
Non-current derivative financial assets (currency forward)	89,475	89,475	54,919	54,919
<b>Financial liabilities (current):</b>				
Trade and other payables	6,723,796	(*)	4,977,339	(*)
Current borrowings (excluding lease liabilities)	2,826,757	(*)	2,180,155	(*)
Current derivative financial liabilities	1,401	1,401	-	-
Current derivative financial liabilities (currency forward)	2,522	2,522	-	-
<b>Financial liabilities (non-current):</b>				
Non-current borrowings (excluding lease liabilities)	5,157,273	5,083,456	4,708,654	4,772,320
Other non-current payables	36,606	(*)	10,672	(*)
Non-current derivative financial liabilities	742	742	126	126

(\*) Fair values for these financial assets and liabilities are not disclosed above as their carrying amounts are reasonable approximation of their fair values.

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(2) Fair values for measurement and disclosure are determined based on the following method:

Fair values of financial liabilities (non-current) are calculated by discounting the expected cash outflows by yield from corporate bonds. These bonds are Korean won denominated with credit rating same as that of the Parent Company (AA+). The applied discount rates as of December 31, 2022 and 2021, are as follows:

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Discount rate	4.94%–5.33%	1.77%–2.80%

(3) Fair value hierarchy

Items that are measured at fair value are categorized by the fair value hierarchy levels, and the defined levels are as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities that the Group can access at the measurement date (Level 1).
- All inputs other than quoted prices included in Level 1 that are observable (either directly, i.e., prices, or indirectly, i.e., derived from prices) for the asset or liability (Level 2).
- Unobservable inputs for the asset or liability (Level 3).

As of December 31, 2022 and 2021, fair value hierarchy of the financial instruments that are consistently measured and recognized at fair value is as follows (Korean won in millions):

	<u>December 31, 2022</u>				
	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>	
<b>Financial assets/liabilities measured at fair value:</b>					
Current derivative financial assets	₩	- ₩	9,167 ₩	- ₩	9,167
Non-current derivative financial assets		-	4,764	4,559	9,323
Non-current derivative financial assets (currency forward)		-	89,475	-	89,475
Other non-current financial assets (marketable financial assets)	50,626	-	-	-	50,626
Other non-current financial assets (non-marketable financial assets)	-	-	259,127	-	259,127
Current derivative financial liabilities		-	1,401	-	1,401
Current derivative financial liabilities (currency forward)		-	2,522	-	2,522
Non-current derivative financial liabilities		-	742	-	742
<b>Financial assets/liabilities not measured at fair value:</b>					
Non-current borrowings (excluding lease liabilities)		-	5,083,456	-	5,083,456

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	<b>December 31, 2021</b>				
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>	
<b>Financial assets/liabilities measured at fair value:</b>					
Current derivative financial assets	₩	- ₩	4,605 ₩	- ₩	4,605
Current derivative financial assets (currency forward)		-	16,894	-	16,894
Non-current derivative financial assets		-	1,305	16,160	17,465
Non-current derivative financial assets (currency forward)		-	54,919	-	54,919
Other non-current financial assets (marketable financial assets)	14,063	-	-	-	14,063
Other non-current financial assets (non-marketable financial assets)	-	-	-	107,374	107,374
Non-current derivative financial liabilities	-	-	126	-	126
<b>Financial assets/liabilities not measured at fair value:</b>					
Non-current borrowings (excluding lease liabilities)	-	-	4,772,320	-	4,772,320

(4) Along with the quantitative sensitivity analysis as of December 31, 2022, the significant unobservable inputs used in the fair value measurement classified at Level 3 of the fair value hierarchy are as follows:

	<b>Evaluation Methods</b>	<b>Significant unobservable Inputs</b>	<b>Range (weighted average)</b>	<b>Sensitivity to fair value measurements</b>
Unlisted equity security:				
Volta Energy Solutions S.a.r.l	Adjusted net asset method	-	-	-
Derivative:				
Put option on Volta Energy Solutions S.a.r.l	Binomial method	Volatility	45.6%	6.12 – 7.2%

**4. SIGNIFICANT ACCOUNTING ESTIMATES AND ASSUMPTIONS:**

The preparation of consolidated financial statements requires the Group to make estimates and assumptions concerning the future. Management also needs to exercise judgement in applying the Group's accounting policies. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates may differ from the related actual results.

The significant estimates and assumptions made by management on the application of the Group's consolidated financial statements are the same as those of the annual consolidated financial statements as of and for the year ended December 31, 2021, except for estimates used in determining income tax expenses.

The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

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(1) Income taxes

The Group's taxable income generated from these operations is subject to income taxes based on tax laws and interpretations of tax authorities in numerous jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain. If certain portion of the taxable income is not used for investments, increase in wages or dividends, the Group is liable to pay additional income tax calculated based on the tax laws. Accordingly, the measurement of current and deferred income taxes is affected by these tax effects. As the Group's income tax is dependent on the investments, increase in wages and dividends, there is an uncertainty measuring the final tax effects.

(2) Provisions

The Group recognizes provisions for product warranties as explained in Note 15. These provisions are estimated based on past experience. Provisions related to voluntary recalls by the Group's customer are estimated based on the number of vehicles subject to recall, estimated total repair cost and cost-sharing ratio.

(3) Fair value of financial instruments

The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group uses its judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing on December 31, 2022 (see Note 3.3).

(4) Impairment of financial assets

The provision for impairment for financial assets is based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation based on the Group's past experience and existing market conditions, as well as forward-looking estimates at the end of each reporting period (see Note 3.1.(2)).

(5) Net defined benefit liability(asset)

The present value of net defined benefit liability(asset) depends on a number of factors that are determined on an actuarial basis using a number of assumptions, including the discount rate (see Note 16).

(6) Lease

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option or not exercise a termination option. Periods covered by the extension option (or the termination option) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

The lease term is reassessed if an option is actually exercised (or not exercised) or the Group becomes obliged to exercise (or not exercise) it. The assessment of reasonable certainty is only revised if a significant event or a significant change in circumstances occurs, which affects this assessment, and that is within the control of the lessee.

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**5. FINANCIAL INSTRUMENTS BY CATEGORY:**

(1) Categorizations of financial instruments are as follows (Korean won in millions):

<b>December 31, 2022</b>					
<b>Financial assets</b>	<b>Financial assets at amortized cost</b>	<b>Financial assets at fair value through profit or loss</b>	<b>Financial assets at FVOCI (*1)</b>	<b>Other financial assets (*2)</b>	<b>Total</b>
Cash and cash equivalents	₩ 5,937,967	₩ -	₩ -	₩ -	₩ 5,937,967
Trade receivables	4,534,502	-	237,344	-	4,771,846
Non-current trade receivables	120,698	-	-	-	120,698
Other current receivables	462,188	-	-	-	462,188
Other non-current receivables	119,058	-	-	-	119,058
Other current financial assets	-	-	-	9,167	9,167
Other non-current financial assets	-	158,202	245,585	4,764	408,551
	<u>₩ 11,174,413</u>	<u>₩ 158,202</u>	<u>₩ 482,929</u>	<u>₩ 13,931</u>	<u>₩ 11,829,475</u>

<b>December 31, 2022</b>					
<b>Financial liabilities</b>	<b>Financial liabilities at amortized cost</b>	<b>Financial liabilities at FVOCI</b>	<b>Other financial liabilities (*3)</b>	<b>Total</b>	
Trade payables	₩ 3,841,766	₩ -	₩ -	₩ -	₩ 3,841,766
Other payables	2,882,030	-	-	-	2,882,030
Current borrowings	2,826,757	-	39,944	-	2,866,701
Other current financial liabilities	-	2,522	1,401	-	3,923
Other non-current payables	36,606	-	-	-	36,606
Non-current borrowings	5,157,273	-	85,279	-	5,242,552
Other non-current financial liabilities	-	-	742	-	742
	<u>₩ 14,744,432</u>	<u>₩ 2,522</u>	<u>₩ 127,366</u>	<u>₩ -</u>	<u>₩ 14,874,320</u>

(\*1) At initial recognition, the Group made an irrevocable election to designate investments in equity instruments as at FVOCI. These instruments are held for the strategic purposes, not for short-term trading. In addition, the Group classified trade receivables under the 'hold to collect and sell' business model as financial assets at FVOCI.

(\*2) Other financial assets include derivative assets.

(\*3) Other financial liabilities include lease liabilities and derivative liabilities.

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<b>December 31, 2021</b>						
<b>Financial assets</b>	<b>Financial assets at amortized cost</b>	<b>Financial assets at fair value through profit or loss</b>	<b>Financial assets at FVOCI (*1)</b>	<b>Total</b>		
Cash and cash equivalents	₩ 1,282,880	₩ -	₩ -	₩ -	₩ -	1,282,880
Trade receivables	2,901,128	-	13,330	-	-	2,914,458
Non-current trade receivables	67,055	-	-	-	-	67,055
Other receivables	814,843	-	-	-	-	814,843
Other non-current receivables	92,271	-	-	-	-	92,271
Other current financial assets	-	16,894	4,605	-	-	21,499
Other non-current financial assets	-	71,748	122,072	-	-	193,820
	<u>₩ 5,158,177</u>	<u>₩ 88,642</u>	<u>₩ 140,007</u>	<u>₩ -</u>	<u>₩ -</u>	<u>5,386,826</u>

<b>December 31, 2021</b>						
<b>Financial liabilities</b>	<b>Financial liabilities at amortized cost</b>	<b>Financial liabilities at fair value through profit or loss</b>	<b>Other financial liabilities (*2)</b>	<b>Total</b>		
Trade payables	₩ -	₩ 2,177,736	₩ -	₩ -	₩ -	2,177,736
Other payables	-	2,799,603	-	-	-	2,799,603
Current borrowings	-	2,180,154	23,222	-	-	2,203,376
Other non-current financial liabilities	126	-	-	-	-	126
Other non-current payables	-	10,672	-	-	-	10,672
Non-current borrowings	-	4,708,654	57,163	-	-	4,765,817
	<u>₩ 126</u>	<u>₩ 11,876,819</u>	<u>₩ 80,385</u>	<u>₩ -</u>	<u>₩ -</u>	<u>11,957,330</u>

(\*1) At initial recognition, the Group made an irrevocable election to designate investments in equity instruments as at FVOCI. These instruments are held for the strategic purposes, not for short-term trading. In addition, the Group classified trade receivables under the 'hold to collect and sell' business model as financial assets at FVOCI.

(\*2) Other financial liabilities include lease liabilities and derivative liabilities.

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(2) Net gains (losses) on each category of financial instruments for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
<b>Interest income:</b>		
Financial assets at amortized cost	₩ 152,690	₩ 21,831
<b>Interest expense:</b>		
Financial liabilities at amortized cost	(120,296)	(83,275)
Other financial liabilities	(2,089)	(1,468)
Financial assets at amortized cost (*1)	(3,289)	(514)
Financial assets at FVOCI (*1)	(31)	(60)
<b>Gains (losses) on valuation or disposal:</b>		
Financial assets at FVOCI (*2)	48,925	5,104
Derivative instruments	17,780	112,260
<b>Exchange differences:</b>		
Financial assets at amortized cost	222,161	213,475
Financial liabilities at amortized cost	(401,292)	(262,369)
Financial assets at fair value through profit or loss	241	-

(\*1) Fees paid to financial institutions for factoring.

(\*2) Changes in fair value are recognized in profit or loss or in other comprehensive income.

**6. CASH AND CASH EQUIVALENTS:**

(1) Details of cash and cash equivalents as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Bank deposits and cash on hand	₩ 1,062,442	₩ 1,004,368
Cash equivalents	4,875,525	278,512
	<u>₩ 5,937,967</u>	<u>₩ 1,282,880</u>

(2) As of December 31, 2022, cash and cash equivalents include ₩22,016 million, which is subject to a restriction on the use and remittance(as of December 31, 2021, was ₩984 million).

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**7. TRADE AND OTHER RECEIVABLES:**

(1) Trade and other receivables and their provisions for impairment as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>December 31, 2022</b>			<b>December 31, 2021</b>		
	<b>Gross amount</b>	<b>Provision for impairment</b>	<b>Carrying amount</b>	<b>Gross amount</b>	<b>Provision for impairment</b>	<b>Carrying amount</b>
Trade receivables	₩ 4,773,080	₩ (1,234)	₩ 4,771,846	₩ 2,914,469	₩ (11)	₩ 2,914,458
Non-current trade receivables	120,698	-	120,698	67,055	-	67,055
Other current receivables	462,242	(54)	462,188	814,897	(54)	814,843
Other non-current receivables	119,058	-	119,058	92,271	-	92,271
	₩ 5,475,078	₩ (1,288)	₩ 5,473,790	₩ 3,888,692	₩ (65)	₩ 3,888,627

(2) Details of other receivables as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
<b>Current:</b>		
Non-trade receivables	₩ 437,182	₩ 806,450
Due from financial institutions	-	1,067
Accrued income	2,963	291
Guarantee deposits provided	<u>22,043</u>	<u>7,035</u>
	<u>462,188</u>	<u>814,843</u>
<b>Non-current:</b>		
Non-trade receivables	5,201	4,285
Due from financial institutions (*)	70,997	60,911
Loans	3,900	1,047
Guarantee deposits provided	38,960	26,028
	<u>119,058</u>	<u>92,271</u>
	<u>₩ 581,246</u>	<u>₩ 907,114</u>

(\*) As of December 31, 2022, due from financial institutions (non-current) is subject to withdrawal restrictions, which includes ₩60,000 million for the Agreement on the Win-Win Growth Cooperation, ₩10,000 million for the loans in relation to the employee stock ownership and PLN 3 million in relation to guarantee deposit for transfer of dangerous waste abroad.

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(3) The aging analysis of trade and other receivables as of December 31, 2022 and 2021, is as follows (Korean won in millions):

	<b>December 31, 2022</b>		<b>December 31, 2021</b>	
	<b>Trade receivables</b>	<b>Other receivables</b>	<b>Trade receivables</b>	<b>Other receivables</b>
<b>Receivables not past due</b>	₩ 4,732,757	₩ 536,530	₩ 2,794,006	₩ 871,245
<b>Past due, but not impaired:</b>				
Up to three months	159,348	27,297	90,969	35,469
Between 3–6 months	439	10,843	15,844	400
Over six months	-	6,576	80,705	-
	159,787	44,716	187,518	35,869
<b>Impaired receivables</b>	1,234	54	-	54
	<u>₩ 4,893,778</u>	<u>₩ 581,300</u>	<u>₩ 2,981,524</u>	<u>₩ 907,168</u>

(4) Changes in the provision for impairment of trade and other receivables for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>2022</b>		<b>2021</b>	
	<b>Trade receivables</b>	<b>Other receivables</b>	<b>Trade receivables</b>	<b>Other receivables</b>
Beginning	₩ 11	₩ 54	₩ 131	₩ 54
Additions (reversal)	481	-	(120)	-
Business combinations	724	-	-	-
Exchange differences	18	-	-	-
Ending	<u>₩ 1,234</u>	<u>₩ 54</u>	<u>₩ 11</u>	<u>₩ 54</u>

(5) As of December 31, 2022 and 2021, the carrying amounts of trade and other receivables are approximation of their fair values.

(6) The Group transferred ₩196,954 million of trade receivables along with substantially all the risks and rewards of ownership. Therefore, the amount was derecognized on the discount date as of December 31, 2022.

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**8. OTHER FINANCIAL ASSETS AND LIABILITIES:**

(1) Details of other financial assets and liabilities as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
<b>Other financial assets:</b>		
Financial assets at FVOCI	₩ 245,585	₩ 120,767
Cash flow hedge	13,931	5,911
Financial assets at FVPL	<u>158,202</u>	<u>88,642</u>
	<u>₩ 417,718</u>	<u>₩ 215,320</u>
<b>Other financial liabilities:</b>		
Cash flow hedge	₩ 2,143	₩ 126
Financial liabilities at FVPL	<u>2,522</u>	<u>-</u>
	<u>₩ 4,665</u>	<u>₩ 126</u>

(2) Details of changes in equity securities included in other financial assets for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Beginning	₩ 120,767	₩ -
Acquisitions/transfer	75,328	115,588
Valuation gain (before income tax deduction), other comprehensive income item	54,743	5,104
Valuation loss (before income tax deduction), profit or loss item	(5,818)	-
Others	<u>565</u>	<u>75</u>
Ending	<u>₩ 245,585</u>	<u>₩ 120,767</u>

The Group has entered into a put option contracts to secure the investment capital for its equity securities held in Volta Energy Solutions S.a.r.l. The major terms of the agreements are as follows:

- Exercise date: from three years after the acceptance date (initial investment date, January 27, 2021) to the following three years
- Exercise price: the amount contributed, less any dividends received from the date of contribution up to the exercise
- Other term: the option cannot be exercised once Volta Energy Solutions S.a.r.l is listed.

(3) No impairment losses on other financial assets were recognized for the years ended December 31, 2022 and 2021.

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**9. INVENTORIES:**

(1) Details of inventories as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	December 31, 2022			December 31, 2021		
	Gross amount	Valuation allowance	Carrying amount	Gross amount	Valuation allowance	Carrying amount
Merchandise	₩ 184,285	₩ (12,040)	₩ 172,245	₩ 70,137	₩ (1,853)	₩ 68,284
Finished/semifinished products	4,393,089	(160,231)	4,232,858	2,510,481	(150,930)	2,359,551
Raw materials	1,630,837	(5,921)	1,624,916	913,144	(5,240)	907,904
Supplies	111,566	-	111,566	100,154	-	100,154
Materials in transit	854,044	-	854,044	459,910	-	459,910
	<u>₩ 7,173,821</u>	<u>₩ (178,192)</u>	<u>₩ 6,995,629</u>	<u>₩ 4,053,826</u>	<u>₩ (158,023)</u>	<u>₩ 3,895,803</u>

(2) The amount of inventories expensed as cost of sales for the years ended December 31, 2022 and 2021, was ₩16,854,040 million and ₩10,691,100 million, respectively.

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**10. INVESTMENTS IN ASSOCIATES AND JOINT VENTURES:**

(1) Changes in investments in associates and joint ventures for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	2022					
	Beginning	Share of profit (loss) of associates and joint ventures		Share of other comprehensive income of associates and joint ventures		Ending
VINFAST LITHIUM BATTERY PACK LLC	₩ 3,769	₩	(1,611)	₩	270	₩ 2,428
Jiangxi VL Battery Co., Ltd.	20,310		(6,821)		(166)	13,323
PT. HLI Green Power	201,488		(28,210)		14,667	187,945
	<u>₩ 225,567</u>	<u>₩</u>	<u>(36,642)</u>	<u>₩</u>	<u>14,771</u>	<u>₩ 203,696</u>

  

	2021					
	Beginning	Acquisitions	Disposals	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income of associates and joint ventures	Ending
HL Greenpower Co., Ltd.(*1)	₩ 22,710	₩ -	₩ (24,557)	₩ 1,847	₩ -	₩ -
WUXI CL New Energy Technology Ltd(*1)	-	-	-	-	-	-
VINFAST LITHIUM BATTERY PACK LLC	4,179	-	-	(730)	320	3,769
Jiangxi VL Battery Co., Ltd.	21,461	-	-	(3,471)	2,320	20,310
PT. HLI Green Power(*2)	-	209,132	-	(9,201)	1,557	201,488
	<u>₩ 48,350</u>	<u>₩ 209,132</u>	<u>₩ (24,557)</u>	<u>₩ (11,555)</u>	<u>₩ 4,197</u>	<u>₩ 225,567</u>

(\*1) During the previous year, the Group disposed of all ownership shares of HL Green Power Co., Ltd. and WUXI CL New Energy Technology Ltd., for ₩28,500 million and ₩0 million, respectively.

(\*2) During the previous year, the Group newly acquired a stake in PT.HLI Green Power for ₩209,132 million.

(2) As of December 31, 2022 and 2021, the processes of adjusting the financial information to the carrying amounts of shares in associates and joint ventures are as follows (Korean won in millions):

	December 31, 2022					
	Net assets	Group's percentage of ownership	Net asset value for shares	Overseas operations translation	Internal transaction and others	Carrying amount
VINFAST LITHIUM BATTERY PACK LLC	₩ 7,409	35	₩ 2,593	₩ (165)	₩ -	₩ 2,428
Jiangxi VL Battery Co., Ltd.	39,141	34	13,308	15	-	13,323
PT. HLI Green Power	440,625	50	220,313	(9,907)	(22,461)	187,945
	<u>₩ 487,175</u>		<u>₩ 236,214</u>	<u>₩ (10,057)</u>	<u>₩ (22,461)</u>	<u>₩ 203,696</u>

  

	December 31, 2021					
	Net assets	Group's percentage of ownership	Net asset value for shares	Overseas operations translation	Internal transaction and others	Carrying amount
VINFAST LITHIUM BATTERY PACK LLC	₩ 11,201	35	₩ 3,920	₩ (151)	₩ -	₩ 3,769
Jiangxi VL Battery Co., Ltd.	59,697	34	20,297	13	-	20,310
PT. HLI Green Power	402,975	50	201,487	1	1	201,488
	<u>₩ 473,873</u>		<u>₩ 225,704</u>	<u>₩ (137)</u>	<u>₩</u>	<u>₩ 225,567</u>

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**11. PROPERTY, PLANT AND EQUIPMENT:**

(1) Changes in property, plant and equipment for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>2022</b>					
	<u>Land</u>	<u>Building</u>	<u>Structures</u>	<u>Machinery</u>	<u>Vehicle</u>	<u>Tool</u>
<b>Beginning</b>						
Carrying amount	₩ 274,358	₩ 3,229,701	₩ 149,144	₩ 8,426,166	₩ 14,643	₩ 1,020,874
Accumulated depreciation	-	(449,313)	(46,203)	(3,962,140)	(6,053)	(529,128)
Accumulated impairment	(668)	(3,470)	(1,835)	(3,450)	(8)	(377)
	<u>₩ 273,690</u>	<u>₩ 2,776,918</u>	<u>₩ 101,106</u>	<u>₩ 4,460,576</u>	<u>₩ 8,582</u>	<u>₩ 491,369</u>
<b>Business combination</b>	-	-	167	2,463	-	-
<b>Acquisition/Replacement</b>	75,163	1,513,326	90,288	2,072,280	2,937	326,432
<b>Disposal/Replacement</b>	(13)	(4,796)	(259)	(39,398)	(96)	(23,256)
<b>Exchange differences</b>	(253)	(39,247)	(2,243)	(88,676)	11	(5,353)
<b>Depreciation</b>	-	(116,633)	(10,360)	(1,346,256)	(2,122)	(172,592)
<b>Ending</b>						
Carrying amount	349,255	4,703,585	236,574	10,227,713	17,118	1,263,884
Accumulated depreciation	-	(570,459)	(56,040)	(5,163,539)	(7,798)	(646,927)
Accumulated impairment	(668)	(3,558)	(1,835)	(3,185)	(8)	(357)
	<u>₩ 348,587</u>	<u>₩ 4,129,568</u>	<u>₩ 178,699</u>	<u>₩ 5,060,989</u>	<u>₩ 9,312</u>	<u>₩ 616,600</u>

	<b>2022(Cont.)</b>					
	<u>Fixtures</u>	<u>Others</u>	<u>Right-of-use assets</u>	<u>Construction in progress</u>	<u>Machinery in transit</u>	<u>Total</u>
<b>Beginning</b>						
Carrying amount	₩ 243,946	₩ -	₩ 117,405	₩ 2,712,769	₩ 14,983	₩ 16,203,989
Accumulated depreciation	(117,308)	-	(28,684)	-	-	(5,138,829)
Accumulated impairment	(526)	-	-	(4,049)	-	(14,383)
	<u>₩ 126,112</u>	<u>₩ -</u>	<u>₩ 88,721</u>	<u>₩ 2,708,720</u>	<u>₩ 14,983</u>	<u>₩ 11,050,777</u>
<b>Business combination</b>	3	-	4,618	-	-	7,251
<b>Acquisition/Replacement</b>	196,420	6,206	78,884	6,391,238	33,016	10,786,190
<b>Disposal/Replacement</b>	(1,915)	(2,891)	(6,811)	(4,526,799)	(38,534)	(4,644,768)
<b>Exchange differences</b>	(3,053)	-	25,881	(15,858)	-	(128,791)
<b>Depreciation</b>	(46,418)	(298)	(44,933)	-	-	(1,739,612)
<b>Ending</b>						
Carrying amount	430,727	3,316	215,777	4,561,629	9,465	22,019,043
Accumulated depreciation	(159,050)	(299)	(69,417)	-	-	(6,673,529)
Accumulated impairment	(528)	-	-	(4,328)	-	(14,467)
	<u>₩ 271,149</u>	<u>₩ 3,017</u>	<u>₩ 146,360</u>	<u>₩ 4,557,301</u>	<u>₩ 9,465</u>	<u>₩ 15,331,047</u>

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	<b>2021</b>					
	<u>Land</u>	<u>Building</u>	<u>Structures</u>	<u>Machinery</u>	<u>Vehicle</u>	<u>Tool</u>
<b>Beginning</b>						
Carrying amount	₩ 259,087	₩ 2,734,415	₩ 132,257	₩ 6,629,916	₩ 10,466	₩ 806,978
Accumulated depreciation	-	(335,064)	(38,965)	(2,769,226)	(4,351)	(412,791)
Accumulated impairment	(668)	(3,463)	(1,834)	(4,185)	(8)	(395)
	<u>₩ 258,419</u>	<u>₩ 2,395,888</u>	<u>₩ 91,458</u>	<u>₩ 3,856,505</u>	<u>₩ 6,107</u>	<u>₩ 393,792</u>
<b>Acquisition/Replacement</b>	14,679	371,597	13,423	1,534,794	4,177	248,308
<b>Disposal/Replacement</b>	(161)	(168)	(540)	(34,114)	(95)	(25,668)
<b>Exchange differences</b>	753	97,179	3,011	190,747	93	12,551
<b>Depreciation</b>	-	(87,578)	(6,246)	(1,087,356)	(1,700)	(137,614)
<b>Ending</b>						
Carrying amount	274,358	3,229,701	149,144	8,426,166	14,643	1,020,874
Accumulated depreciation	-	(449,313)	(46,203)	(3,962,140)	(6,053)	(529,128)
Accumulated impairment	(668)	(3,470)	(1,835)	(3,450)	(8)	(377)
	<u>₩ 273,690</u>	<u>₩ 2,776,918</u>	<u>₩ 101,106</u>	<u>₩ 4,460,576</u>	<u>₩ 8,582</u>	<u>₩ 491,369</u>

	<b>2021(Cont.)</b>				
	<u>Fixtures</u>	<u>Right-of-use assets</u>	<u>Construction in progress</u>	<u>Machinery in transit</u>	<u>Total</u>
<b>Beginning</b>					
Carrying amount	₩ 168,638	₩ 51,438	₩ 1,553,876	₩ 23,269	₩ 12,370,340
Accumulated depreciation	(94,993)	(16,543)	-	-	(3,671,933)
Accumulated impairment	(524)	-	(3,716)	-	(14,793)
	<u>₩ 73,121</u>	<u>₩ 34,895</u>	<u>₩ 1,550,160</u>	<u>₩ 23,269</u>	<u>₩ 8,683,614</u>
<b>Acquisition/Replacement</b>	88,390	82,174	3,682,835	32,360	6,072,737
<b>Disposal/Replacement</b>	(12,575)	(4,066)	(2,641,261)	(40,646)	(2,759,294)
<b>Exchange differences</b>	2,898	2,082	116,986	-	426,300
<b>Depreciation</b>	(25,722)	(26,364)	-	-	(1,372,580)
<b>Ending</b>					
Carrying amount	243,946	117,405	2,712,769	14,983	16,203,989
Accumulated depreciation	(117,308)	(28,684)	-	-	(5,138,829)
Accumulated impairment	(526)	-	(4,049)	-	(14,383)
	<u>₩ 126,112</u>	<u>₩ 88,721</u>	<u>₩ 2,708,720</u>	<u>₩ 14,983</u>	<u>₩ 11,050,777</u>

(2) The Group capitalized ₩8,701 million of borrowing costs in relation to acquisition of property, plant and equipment (for the year ended December 31, 2021, were ₩17,732 million). The capitalization rate of borrowings used to determine the amount of borrowing costs eligible for capitalization is 1.27% (for the year ended December 31, 2021, was 0.79%).

(3) Line items including depreciation for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>2022</b>	<b>2021</b>
Cost of sales	₩ 1,605,134	₩ 1,275,038
Selling and administrative expenses	134,478	97,424
Discontinued operations	-	118
	<u>₩ 1,739,612</u>	<u>₩ 1,372,580</u>

**LG Energy Solution, Ltd. and its subsidiaries**  
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(4) Lease

① Amounts recognized in the consolidated statements of financial position

Details of amounts recognized in the consolidated statements of financial position in relation to lease for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
<b>Right-of-use assets (*):</b>		
Real estate	₩ 132,480	₩ 81,965
Machinery	465	64
Vehicles	11,700	6,085
Tools	1,258	234
Equipment	457	373
	<u>₩ 146,360</u>	<u>₩ 88,721</u>

(\*) Included in 'Property, plant and equipment' in the consolidated statements of financial position.

Additions to the right-of-use assets for the year ended December 31, 2022, are ₩83,502 million (for the year ended December 31, 2021, were ₩82,174 million).

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
<b>Lease liabilities (*):</b>		
Current	₩ 39,944	₩ 23,221
Non-current	85,279	57,163
	<u>₩ 125,223</u>	<u>₩ 80,384</u>

(\*) Included in 'Borrowings' in the consolidated statements of financial position.

② Amounts recognized in the consolidated statements of profit or loss

Details of amounts recognized in the consolidated statements of profit or loss in relation to lease for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
<b>Depreciation of right-of-use assets:</b>		
Real estate	₩ 36,755	₩ 20,826
Machinery	352	34
Vehicles	7,129	4,961
Tools	363	160
Equipment	334	383
	<u>₩ 44,933</u>	<u>₩ 26,364</u>
Interest expense relating to lease liabilities (included in finance cost)	₩ 2,089	₩ 1,468
Expense relating to short-term leases (included in cost of goods sold and administrative expenses)	9,041	10,709
Expense relating to leases of low-value assets that are not short-term leases (included in cost of goods sold and administrative expenses)	5,572	4,133

Total cash outflow for leases for the year ended December 31, 2022, is ₩54,592 million (for the year ended December 31, 2021, was ₩44,201 million).

**LG Energy Solution, Ltd. and its subsidiaries**  
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**12. INTANGIBLE ASSETS:**

(1) Changes in intangible assets for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>2022</b>									
	<b>Software</b>		<b>Industrial Property Rights</b>		<b>Memberships</b>		<b>Others</b>		<b>Total</b>	
	₩		₩		₩		₩		₩	
<b>Beginning</b>	₩	267,525	₩	175,148	₩	11,454	₩	1,233	₩	455,360
Business combination		1,503		-		-		-		1,503
Acquisition/transfer		208,266		65,751		9,456		8,160		291,633
Disposal/transfer		(377)		(760)		(5,997)		(388)		(7,522)
Exchange differences		(1,653)		-		(4)		(7)		(1,664)
Amortization		(78,307)		(18,731)		-		(182)		(97,220)
<b>Ending</b>	₩	<u>396,957</u>	₩	<u>221,408</u>	₩	<u>14,909</u>	₩	<u>8,816</u>	₩	<u>642,090</u>
	<b>2021</b>									
	<b>Software</b>		<b>Industrial Property Rights</b>		<b>Memberships</b>		<b>Others</b>		<b>Total</b>	
	₩		₩		₩		₩		₩	
<b>Beginning</b>	₩	167,349	₩	148,105	₩	9,361	₩	971	₩	325,786
Acquisition/transfer		156,534		44,032		2,076		1,159		203,801
Disposal/transfer		(1,484)		(740)		-		(782)		(3,006)
Exchange differences		1,858		(1)		17		33		1,907
Amortization		(56,732)		(16,248)		-		(148)		(73,128)
<b>Ending</b>	₩	<u>267,525</u>	₩	<u>175,148</u>	₩	<u>11,454</u>	₩	<u>1,233</u>	₩	<u>455,360</u>

(2) Line items, including amortization of intangibles, are as follows (Korean won in millions):

	<b>2022</b>	<b>2021</b>
Cost of sales	₩ 31,526	₩ 27,447
Selling and administrative expenses	65,694	45,670
Discontinued operations	-	11
	<u>₩ 97,220</u>	<u>₩ 73,128</u>

(3) The total amount of research and development expenses recognized by the Group is ₩865,667 million (for the year ended December 31, 2021, was ₩631,078 million).

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(4) Greenhouse gas emission right

① Based on the Korea Emission Trading Scheme, changes in greenhouse gas emission rights (included in other intangible assets) for the years ended December 31, 2022 and 2021, are as follows (ton in thousands and Korean won in millions):

	2022										
	2021		2022		2023		2024		2025		
	Ton	Amount	Ton	Amount	Ton	Amount	Ton	Amount	Ton	Amount	
Beginning	-	₩ -	-	₩ -	-	₩ -	-	₩ -	-	₩ -	-
Allocated	281	-	300	-	300	-	297	-	297	-	-
Purchase/sale	(2)	(20)	-	-	-	-	-	-	-	-	-
Borrowing/carried over	22	388	3	-	-	-	-	-	-	-	-
Government submission	(301)	(368)	-	-	-	-	-	-	-	-	-
Ending	-	₩ -	303	₩ -	300	₩ -	297	₩ -	297	₩ -	-

  

	2021											
	2020		2021		2022		2023		2024		2025	
	Ton	Amount	Ton	Amount	Ton	Amount	Ton	Amount	Ton	Amount	Ton	Amount
Beginning	-	₩ -	-	₩ -	-	₩ -	-	₩ -	-	₩ -	-	₩ -
Allocated	236	-	275	-	300	-	300	-	297	-	297	-
Purchase/sale	75	1,111	-	-	-	-	-	-	-	-	-	-
Borrowing/carried over	(25)	(388)	25	388	-	-	-	-	-	-	-	-
Government submission	(286)	(723)	-	-	-	-	-	-	-	-	-	-
Ending	-	₩ -	300	₩ 388	300	₩ -	300	₩ -	297	₩ -	297	₩ -

② Based on the European Union Emission Trading System, changes in greenhouse gas emission rights (included in other intangible assets) for the year ended December 31, 2022, are as follows (ton in thousands and Korean won in millions):

	2022			
	2021		2022	
	Ton	Amount	Ton	Amount
Beginning	-	₩ -	-	₩ -
Purchase/sale	35	3,858	78	7,902
Government submission	(34)	(3,792)	-	-
Foreign exchange difference	-	1	-	33
Ending	1	₩ 67	78	₩ 7,935

**LG Energy Solution, Ltd. and its subsidiaries**  
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**13. OTHER CURRENT AND NON-CURRENT ASSETS:**

Details of other current and other non-current assets as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
<b>Current:</b>		
Prepayments and prepaid expenses	₩ 310,004 ₩	79,821
Prepaid value-added tax	112,973	309,593
Others	<u>158,290</u>	<u>67,517</u>
	<u>₩ 581,267 ₩</u>	<u>456,931</u>
<b>Non-current:</b>		
Long-term prepayments and long-term prepaid expenses	₩ 133,914 ₩	63,581
Net defined benefit assets	222,519	329
Others	<u>69</u>	<u>27</u>
	<u>₩ 356,502 ₩</u>	<u>63,937</u>

**14. BORROWINGS:**

(1) Borrowings as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
<b>Current:</b>		
Short-term borrowings	₩ 1,243,992 ₩	1,146,277
Current portion of long-term borrowings	907,687	1,033,878
Current portion of debentures	675,078	-
Current lease liabilities	<u>39,944</u>	<u>23,221</u>
	<u>₩ 2,866,701 ₩</u>	<u>2,203,376</u>
<b>Non-current:</b>		
Long-term borrowings	₩ 3,697,317 ₩	2,662,846
Debentures	1,459,956	2,045,808
Non-current lease liabilities	<u>85,279</u>	<u>57,163</u>
	<u>5,242,552</u>	<u>4,765,817</u>
	<u>₩ 8,109,253 ₩</u>	<u>6,969,193</u>

**LG Energy Solution, Ltd. and its subsidiaries**  
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(2) Details of borrowings as of December 31, 2022 and 2021, are as follows:

1) Short-term borrowings (Korean won in millions)

	<b>Bank</b>	<b>Latest maturity date</b>	<b>Interest rate (%)</b>		<b>December 31, 2022</b>	<b>December 31, 2021</b>
Bank loans	KDB and others	2023.11.26	2.63–5.56	₩	1,243,992 ₩	1,146,277

2) Long-term borrowings (Korean won in millions)

		<b>December 31, 2022</b>					
		<b>Bank</b>	<b>Interest rate (%)</b>	<b>Amount</b>	<b>Current portion</b>	<b>Non-current portion</b>	
Borrowings in foreign currencies		Citibank	EUR: 3M EURIBOR + 0.62–0.70	₩ 203,096 ₩	67,699 ₩	135,397	
		DBS	6M EURIBOR + 0.60	135,397	135,397	-	
		DOE	3.65	705,620	-	705,620	
		EBRD	6M EURIBOR + 0.62	257,255	67,698	189,557	
		EIB	3M EURIBOR + 0.47	649,908	144,424	505,484	
		ING	6M EURIBOR + 0.70	94,778	94,778	-	
		KDB	USD: 3M LIBOR + 0.91–0.93	296,581	214,165	82,416	
		KDB/Korea Exim/Nonghyup	EUR: 3M EURIBOR + 0.89–1.04	1,369,049	-	1,369,049	
		KEB Hana	3M EURIBOR + 0.62	270,795	-	270,795	
		MUFG	6M EURIBOR + 0.80	67,699	-	67,699	
		SMBC	EUR: 0.32–0.48	192,941	148,937	44,004	
		China: Agricultural Bank	LPR(1Y) – 0.70	68,222	4,355	63,867	
		China	LPR (1Y) – 0.60–1.00	172,462	30,234	142,228	
		China: Bank of Communications	LPR (1Y) – 0.75–1.00	121,201	-	121,201	
					<u>₩ 4,605,004</u>	<u>₩ 907,687</u>	<u>₩ 3,697,317</u>
			<b>December 31, 2021</b>				
		<b>Bank</b>	<b>Interest rate (%)</b>	<b>Amount</b>	<b>Current portion</b>	<b>Non-current portion</b>	
Borrowings in foreign currencies		Citibank	EUR: 3M EURIBOR + 0.62–0.70	₩ 201,530 ₩	- ₩	201,530	
		DBS	6M EURIBOR + 0.60	134,353	-	134,353	
		EBRD	6M EURIBOR + 0.62	322,448	67,177	255,271	
		EIB	3M EURIBOR + 0.47	644,893	-	644,893	
		HSBC	USD: 3M LIBOR + 1.40	8,318	8,318	-	
		ING	6M EURIBOR + 0.70–0.83	161,224	67,177	94,047	
		KDB	USD: 3M LIBOR + 0.91–0.93	251,168	70,541	180,627	
		KDB/Korea Exim/Nonghyup	EUR: 3M EURIBOR + 1.00–1.50	1,293,697	738,942	554,755	
		KEB Hana	3M EURIBOR + 0.62	268,706	-	268,706	
		MUFG	6M EURIBOR + 0.60–0.80	134,354	67,177	67,177	
		SMBC	EUR: 0.32–0.48	201,529	10,076	191,453	
		China: Agricultural Bank	LPR (1Y) + 0.70	74,504	4,470	70,034	
					<u>₩ 3,696,724</u>	<u>₩ 1,033,878</u>	<u>₩ 2,662,846</u>

**LG Energy Solution, Ltd. and its subsidiaries**  
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3) Debentures (USD in thousands, EUR in thousands, and Korean won in millions)

		December 31, 2022					
	Financial institution	Interest rate (%)	Latest maturity date	Amount	Current portion	Non-current portion	
NH							
1st Debenture (non-guaranteed/public)	Investment & Securities Co., Ltd. and others	2.21	2026.03.13	₩ 200,000	₩ -	₩ 200,000	
USD foreign currency debenture (non-guaranteed)	Citibank and others	3.25	2024.10.15	633,650 (USD 500,000)	-	633,650	
USD foreign currency debenture (non-guaranteed)	Citibank and others	3.63	2029.04.15	633,650 (USD 500,000)	-	633,650	
EUR foreign currency debenture (non-guaranteed)	Citibank and others	0.50	2023.04.15	675,600 (EUR 500,000)	675,600	-	
Less: discount on debentures	-	-	-	(7,866)	(522)	(7,344)	
				<u>₩ 2,135,034</u>	<u>₩ 675,078</u>	<u>₩ 1,459,956</u>	

		December 31, 2021					
	Financial institution	Interest rate (%)	Latest maturity date	Amount	Current portion	Non-current portion	
NH							
1st Debenture (non-guaranteed/public)	Investment & Securities Co., Ltd. and others	2.21	2026.03.13	₩ 200,000	₩ -	₩ 200,000	
USD foreign currency debenture (non-guaranteed)	Citibank and others	3.25	2024.10.15	592,750 (USD 500,000)	-	592,750	
USD foreign currency debenture (non-guaranteed)	Citibank and others	3.63	2029.04.15	592,750 (USD 500,000)	-	592,750	
EUR foreign currency debenture (non-guaranteed)	Citibank and others	0.50	2023.04.15	671,170 (EUR 500,000)	-	671,170	
Less: discount on debentures	-	-	-	(10,862)	-	(10,862)	
				<u>₩ 2,045,808</u>	<u>₩ -</u>	<u>₩ 2,045,808</u>	

4) Lease liabilities (Korean won in millions)

		December 31, 2022				
	Interest rate (%)	Latest maturity date	Amount	Current portion	Non-current portion	
Baeksan industry and others	0.67-5.01	2042.6.9	₩ 125,223	₩ 39,944	₩ 85,279	
		December 31, 2021				
	Interest rate (%)	Latest maturity date	Amount	Current portion	Non-current portion	
Baeksan industry and others	0.67-5.01	2027.12.31	₩ 80,384	₩ 23,221	₩ 57,163	

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**15. PROVISIONS:**

Changes in provisions for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>2022</b>				
	<b>Warranty(*1)</b>	<b>Greenhouse gas emission(*2)</b>	<b>Provision for restoration(*3)</b>	<b>Legal claims(*4)</b>	<b>Total</b>
Beginning	₩ 2,103,880	₩ 79	₩ 3,069	₩ 987	₩ 2,108,015
Business combination	4,999	-	-	-	4,999
Provision transfer	630,174	12,493	1,049	-	643,716
Used	(1,256,153)	(3,860)	-	(987)	(1,261,000)
Ending	1,482,900	8,712	4,118	-	1,495,730
Less: current portion	(968,237)	(8,712)	-	-	(976,949)
	<u>₩ 514,663</u>	<u>₩ -</u>	<u>₩ 4,118</u>	<u>₩ -</u>	<u>₩ 518,781</u>

  

	<b>2021</b>				
	<b>Warranty(*1)</b>	<b>Greenhouse gas emission(*2)</b>	<b>Provision for restoration(*3)</b>	<b>Legal claims(*4)</b>	<b>Total</b>
Beginning	₩ 1,238,671	₩ 842	₩ -	₩ 331	₩ 1,239,844
Provision transfer	1,463,697	(39)	3,069	6,304	1,473,031
Used	(598,488)	(724)	-	(5,648)	(604,860)
Ending	2,103,880	79	3,069	987	2,108,015
Less: current portion	(1,527,397)	(79)	-	-	(1,527,476)
	<u>₩ 576,483</u>	<u>₩ -</u>	<u>₩ 3,069</u>	<u>₩ 987</u>	<u>₩ 580,539</u>

(\*1) Warranty provisions have been accrued for the estimated warranty costs to be incurred due to quality control, exchange and refunds with regard to products based on historical experience. In addition, provisions related to replacement costs due to ESS replacement costs and voluntary automotive battery recalls are included. The amount recognized as a provision shall be the best estimate of the expenditure required to settle the present obligation at the end of the reporting period.

(\*2) In relation to greenhouse gas emissions, the Group estimates the expected future costs of emissions exceeding the Group's emission rights for the year and recognizes them as provisions. Estimated emissions are 417 thousand tons for the year ended December 31, 2022 (for the year ended December 31, 2021, were 255 thousand tons).

(\*3) The Group estimates the cost of restoring the leased office to its original state and records it as a provision.

(\*4) Lawsuit provisions have been accrued for certain pending cases.

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**16. NET DEFINED BENEFIT LIABILITIES (ASSETS):**

(1) Details of net defined benefit liabilities (assets) as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Present value of defined benefit obligations (*1)	₩ 549,225	₩ 554,014
Fair value of plan assets	(771,244)	(554,142)
	<u>₩ (222,019)</u>	<u>₩ (128)</u>
Net defined benefit liabilities	499	201
Net defined benefit assets (*2)	<u>(222,518)</u>	<u>(329)</u>
	<u>₩ (222,019)</u>	<u>₩ (128)</u>

(\*1) The present value of retirement benefit obligations is the amount after deducting contributions to the National Pension Plan of ₩42 million as of December 31, 2022 (as of December 31, 2021, was ₩45 million).

(\*2) The ₩222,518 million of plan assets exceeding the defined benefit obligations of the Parent Company is included in other non-current assets as of December 31, 2022 (as of December 31, 2021, was ₩329 million).

(2) The amounts recognized in the consolidated statements of profit or loss for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Current service cost	₩ 77,785	₩ 70,936
Interest cost	(10)	270
	<u>₩ 77,775</u>	<u>₩ 71,206</u>

(3) Retirement benefits recognized for defined contribution plan for the year ended December 31, 2022, amounted to ₩1,862 million (for the year ended December 31, 2021, were ₩965 million).

(4) Retirement benefits recognized in the consolidated statements of profit or loss for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Cost of sales	₩ 37,730	₩ 35,773
Selling and administrative expenses	41,907	36,398
	<u>₩ 79,637</u>	<u>₩ 72,171</u>

(5) Changes in the present value of defined benefit obligations for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Beginning	₩ 554,014	₩ 458,710
Transfer in	8,212	34,251
Transfer out	(2,991)	(1,274)
Current service cost	77,785	70,936
Interest expense	16,409	12,939
Remeasurements:		
Actuarial loss from change in financial assumption	(102,359)	(36,305)
Actuarial gain from change in demographic assumption	(3,256)	1,766
Actuarial gain due to the difference between the estimated and the actual	31,915	20,755
Others	792	10,526
Foreign currency conversion difference	(30)	-
Payments from plans	<u>(31,266)</u>	<u>(18,290)</u>
Ending	<u>₩ 549,225</u>	<u>₩ 554,014</u>

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(6) Changes in the fair value of plan assets for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Beginning	₩ 554,142	₩ 415,924
Plan assets transferred through transfer between affiliates	-	1,135
Interest income	16,419	12,669
Remeasurements:		
Return on plan assets (excluding amounts included in interest income)	(4,390)	(5,801)
Contribution:		
Employer contribution to plan assets	235,213	147,000
Payments from plans	(29,120)	(16,054)
Administrative costs	(1,020)	(731)
Ending	<u>₩ 771,244</u>	<u>₩ 554,142</u>

(7) The actual return on plan assets for the year ended December 31, 2022, was ₩12,029 million (for the year ended December 31, 2021, was ₩6,868 million).

(8) The significant actuarial assumptions as of December 31, 2022 and 2021, are as follows:

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Discount rate	5.40%	3.02%
Salary growth rate	5.96%	5.00%

(9) The sensitivity analysis for changes in key actuarial assumptions as of December 31, 2022, is as follows (Korean won in millions):

	<u>Increase by 1.0%</u>	<u>Decrease by 1.0%</u>
Discount rate:		
Increase (decrease) in defined benefit liabilities	₩ (61,373)	₩ 73,311
Salary growth rate:		
Increase (decrease) in defined benefit liabilities	76,665	(64,886)

A decrease in corporate bond yields may lead most significantly to an increase in defined benefit liabilities.

The above sensitivity analyses are based on a change in an assumption, while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. The sensitivity of the defined benefit obligation to changes in actuarial assumptions is calculated using the projected unit credit method, the same method applied when calculating the defined benefit obligations recognized in the consolidated statements of financial position.

The methods and assumptions used for the sensitivity analysis are the same as those of the previous period.

(10) Plan assets as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>		<u>December 31, 2021</u>	
	<u>Amount</u>	<u>Composition (%)</u>	<u>Amount</u>	<u>Composition (%)</u>
Insurance contracts with guaranteed yield	₩ 771,244	100	₩ 554,142	100

Plan assets consist of guaranteed debt instruments and others which have no quoted market prices in an active market.

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(11) As of December 31, 2022, the weighted average maturity of the defined benefit obligations is 13.06 years.

The Group reviews the level of the fund every year and has a policy to compensate for any loss in the fund. The estimated contribution for the year ended December 31, 2023 is ₩21,800 million.

**17. OTHER CURRENT AND NON-CURRENT LIABILITIES:**

Details of other current and non-current liabilities as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
<b>Current:</b>		
Advances from customers	₩ 131,482	₩ 268,789
Withholdings	52,642	54,988
Unearned revenues	68,225	67,433
Accrued expenses	448,085	219,149
	<u>₩ 700,434</u>	<u>₩ 610,359</u>
<b>Non-current:</b>		
Long-term accrued expenses	₩ 23,041	₩ 26,302
Long-term unearned revenues	215,645	88,093
Long-term advance received	114,544	16,828
	<u>₩ 353,230</u>	<u>₩ 131,223</u>

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**18. COMMITMENTS AND CONTINGENCIES:**

- (1) The Group is jointly liable with LG Chem Ltd. for liabilities recognized before the split-off date.
- (2) As of December 31, 2022, the Group has been guaranteed by Seoul Guarantee Insurance Company for the execution of contracts and others.
- (3) As of December 31, 2022, the Group has various specific line of credit agreements with several financial institutions as follows (Korean won in millions and foreign currencies in millions):

	Currency	December 31, 2022	
		The Parent Company	Certain subsidiaries
Limit of bank overdraft	KRW	8,700	-
	EUR	-	75
Limit of the letter of credit	USD	62	654
	CNY	-	1,939
Limit of discount of notes from export	USD	485	-
Limit of guaranteed payments in other foreign currency	USD	220	-
B2B purchase arrangements	KRW	125,000	-
General loan agreements	USD	-	4,892
	CNY	-	5,580
	EUR	-	2,978
Derivatives	KRW	-	24
	USD	663	678
	EUR	-	156
Factoring arrangements	KRW	150,000	-
	CNY	-	450
Limit of other credit	USD	70	-

- (4) As of December 31, 2022, the Group has entered into payment guarantee contracts of USD 25 million, EUR 2 million and ₩7,755 million with financial institutions in relation to product warranty for certain installed products. Also, certain subsidiaries have entered into payment guarantee contracts of CNY 250 million with financial institutions in relation to custom clearance of imported raw materials.
- (5) As of December 31, 2022, the Group has entered into an arrangement with General Motors (“GM”) regarding joint investment in Ultium Cells Holdings LLC and Ultium Cells LLC, whereby each party can sell its shares to third parties in eight years after the inception of the contract. In addition, if one party defaults, the other party has the right to purchase shares from the other party. In this regard, the Group has completed the government's approval process for the use of core technologies in accordance with the Industrial Technology Protection Act.
- (6) The Group has been sued in two class actions by consumers in relation to the sales of mobile batteries and GM Bolt EV, and two cases are still in process as of December 31, 2022. The Group has also been sued in other 130 cases (amounted to ₩3,446 million) and has filed three lawsuit cases (amounted to USD 90 million and ₩113 million). The ultimate outcome of these pending cases cannot be determined at the reporting date.

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(7) The Group has entered into a license agreement with LG Corp. to use trademarks on the products that the Group manufactures and sells, and on the services the Group provides in relation to its business.

(8) As of December 31, 2022, the Group has entered into a joint venture agreement with Honda and has committed to invest USD 1,802 million. During the year ended December 31, 2022, the Company has decided to provide a payment guarantee of USD 450 million determined by its proportionate ownership of the borrowed amount up to a maximum limit of USD 883 million.

(9) As of December 31, 2022, the Group has entered into a joint venture agreement with Stellantis and has committed to invest USD 1,464 million.

(10) Capital expenditure arrangements that have not incurred as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Property, plant and equipment	₩ 4,938,173	₩ 3,080,278

(11) Investment commitments as of December 31, 2022, are as follows (Korean won in millions and USD in million):

	<u>Currency</u>	<u>Contractual amount</u>	<u>Total investments</u>	<u>Remaining amount</u>
BNZ (Beyond Net Zero) Fund	USD	75	23	52
Secondary Battery Growth Fund	KRW	6,700	2,680	4,020
KBE(Korea Battery ESG) Fund	KRW	75,000	27,587	47,413

(12) As of December 31, 2022, the Group has entered into payment guarantee for the borrowings of ₩88,711 million, and the details are as follows:

<u>Guarantor</u>	<u>Guarantee</u>	<u>Financial Instruments</u>	<u>Guaranteed amount</u>		<u>Credit limit</u>	
			<u>December 31, 2022</u>	<u>December 31, 2021</u>	<u>December 31, 2022</u>	<u>December 31, 2021</u>
LG Energy Solution, Ltd.	PT. HLI Green Power	ANZ and others	₩ 88,711	₩ -	₩ 450,525	₩ -

**19. SHARE CAPITAL:**

Changes in share capital and share premium for the year ended December 31, 2022, are as follows (Korean won in millions and shares):

	<u>Ordinary shares</u>		
	<u>Number of shares</u>	<u>Share capital</u>	<u>Share premium</u>
December 31, 2021	200,000,000	₩ 100,000	₩ 7,510,351
Changes	34,000,000	17,000	10,079,371
December 31, 2022	234,000,000	₩ 117,000	₩ 17,589,722

**20. RETAINED EARNINGS:**

Details of retained earnings as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Unappropriated retained earnings	₩ 1,154,518	₩ 337,587

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**21. SELLING AND ADMINISTRATIVE EXPENSES:**

Selling and administrative expenses for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Wages and salaries	₩ 803,570	₩ 517,082
Retirement benefits	41,907	36,398
Employee benefits	152,923	113,712
Travel expenses	50,539	25,957
Water and utilities	48,514	30,187
Packaging expenses	8,048	1,133
Rental expenses	68,365	50,448
Commission expenses	482,151	314,023
Depreciation	140,358	103,495
Advertising expenses	18,245	13,056
Freight expenses	234,324	153,936
Training expenses	22,194	10,819
Amortization	65,694	45,670
Sample expenses	3,114	4,586
Development costs	134,804	106,942
Addition of warranty provisions	630,174	1,463,697
Others	171,889	139,172
	<u>₩ 3,076,813</u>	<u>₩ 3,130,313</u>

**22. CLASSIFICATION OF EXPENSES BY NATURE:**

Cost of sales and selling and administrative expenses by nature for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Changes in inventories of merchandise, finished goods, semifinished goods, and work in process	₩ (1,977,268)	₩ (574,232)
Raw materials and consumables used	17,533,286	10,306,125
Purchase of merchandise	1,298,022	959,207
Employee benefit expenses	2,364,806	1,609,484
Advertising expenses	18,512	13,368
Freight expenses	262,484	170,765
Commission expenses	895,417	674,623
Depreciation and amortization	1,842,713	1,451,650
Rent expenses and usage fee	51,439	36,310
Addition of warranty provisions	630,174	1,463,697
Other expenses	1,465,305	972,439
	<u>₩ 24,384,890</u>	<u>₩ 17,083,436</u>

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**23. EMPLOYEE BENEFIT EXPENSES:**

Details of employee benefit expenses for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Wages and salaries	₩ 1,999,607	₩ 1,326,792
Retirement benefits: defined benefit plan	77,775	71,206
Retirement benefits: defined contribution plan	1,862	965
Others	285,562	210,521
	<u>₩ 2,364,806</u>	<u>₩ 1,609,484</u>

**24. FINANCE INCOME AND COSTS:**

Details of finance income and costs for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
<b>Finance income:</b>		
Interest income (*1)	₩ 152,690	₩ 21,831
Exchange differences	196,750	187,797
Gain on derivatives	36,097	130,368
	<u>₩ 385,537</u>	<u>₩ 339,996</u>
<b>Finance costs:</b>		
Interest expense (*2)	₩ 113,684	₩ 67,011
Exchange differences	377,679	227,648
Loss on disposal of trade receivables	3,320	574
Loss on derivatives	24,338	25
	<u>₩ 519,021</u>	<u>₩ 295,258</u>

(\*1) Details of interest income for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Due from financial institutions	₩ 143,908	₩ 14,116
Other loans and receivables	8,782	7,715
	<u>₩ 152,690</u>	<u>₩ 21,831</u>

(\*2) Details of interest expense for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Interest on financial institutions	₩ 60,909	₩ 30,732
Interest on financial lease liabilities	2,089	1,468
Interest on debentures	57,361	51,400
Other interest expenses	2,026	1,143
Capitalized interest for qualifying assets	(8,701)	(17,732)
	<u>₩ 113,684</u>	<u>₩ 67,011</u>

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**25. OTHER NON-OPERATING INCOME:**

Details of other non-operating income for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>		<u>2021</u>
Exchange differences	₩ 1,294,890	₩	427,553
Gain on disposal of property, plant and equipment	678		6,416
Gain on disposal of investments in associates	-		3,820
Others	53,917		27,217
	<u>₩ 1,349,485</u>	₩	<u>465,006</u>

**26. OTHER NON-OPERATING EXPENSES:**

Details of other non-operating expenses for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>		<u>2021</u>
Exchange differences	₩ 1,292,851	₩	436,596
Loss on disposal of property, plant and equipment	61,731		40,781
Loss on disposal of intangible asset	244		93
Donations	1,866		2,661
Others	41,073		9,343
	<u>₩ 1,397,765</u>	₩	<u>489,474</u>

**27. INCOME TAX EXPENSE AND DEFERRED TAX:**

(1) Details of income tax benefit for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>		<u>2021</u>
Current tax on profit for the period	₩ 490,216	₩	521,797
Adjustment for past income tax	4,929		7,086
Deferred tax – movement in temporary differences	297,444		(476,203)
Changes in deferred tax – tax rate change	41,938		-
Changes in deferred tax – tax credit carryforwards	(189,183)		7,837
Changes in deferred tax – tax loss carryforwards	(346,311)		970
	<u>₩ 299,033</u>	₩	<u>61,487</u>
Deferred tax changed directly to equity	(69,073)		38,582
Others	(14,472)		(23,546)
	<u>₩ 215,488</u>	₩	<u>76,523</u>

(2) The aggregate deferred tax charged directly to equity (other comprehensive income) for the years ended December 31, 2022 and 2021, are as follows: (Korean won in millions)

	<u>2022</u>		<u>2021</u>
Remeasurements of net defined benefit liabilities	₩ (18,847)	₩	703
Gain and losses on valuation of financial assets at FVOCI	(16,196)		(1,404)
Gain and losses on valuation of derivative instruments	-		6,459
Consolidation adjustment	(29,872)		32,824
Others	(4,158)		-
	<u>₩ (69,073)</u>	₩	<u>38,582</u>

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(3) Changes in deferred tax assets (liabilities) for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>2022</b>					
	<b>Increase(decrease)</b>					<b>Ending</b>
	<b>Beginning</b>	<b>Profit(loss) for the period</b>	<b>Other comprehensive income(loss)</b>	<b>Exchange differences</b>	<b>Business combination and others</b>	
Defined benefit liabilities	₩ 137,924	₩ 11,170	₩ (18,847)	₩ -	₩ -	₩ 130,247
Plan assets	(149,882)	(35,840)	-	-	-	(185,722)
Provisions	582,415	(219,907)	-	(2,170)	-	360,338
Property, plant and equipment	100,046	35,071	-	372	-	135,489
Intangible assets	4,223	472	-	(49)	-	4,646
Investments in subsidiaries, associates and joint ventures	(64,986)	(39,676)	-	-	-	(104,662)
Government grants	214,678	5,987	-	(5,872)	-	214,793
Succession of assets (Property, plant and equipment)	79,837	(12,361)	-	-	-	67,476
Succession of assets (Patents)	589,677	(25,251)	-	-	-	564,426
Succession of assets (Others)	600	15	-	-	-	615
Others	267,874	22,391	(20,354)	(125)	(4,536)	265,250
	<u>₩ 1,762,406</u>	<u>₩ (257,929)</u>	<u>₩ (39,201)</u>	<u>₩ (7,844)</u>	<u>₩ (4,536)</u>	<u>₩ 1,452,896</u>
Consolidation adjustment	₩ 33,624	₩ -	₩ (29,872)	₩ -	₩ -	₩ 3,752
Tax credit carryforwards	-	189,183	-	-	-	189,183
Tax loss carryforwards	-	346,311	-	-	-	346,311
Deferred tax assets (liabilities)	<u>₩ 1,796,030</u>	<u>₩ 277,565</u>	<u>₩ (69,073)</u>	<u>₩ (7,844)</u>	<u>₩ (4,536)</u>	<u>₩ 1,992,142</u>

	<b>2021</b>					
	<b>Increase(decrease)</b>					<b>Ending</b>
	<b>Beginning</b>	<b>Profit(loss) for the period</b>	<b>Other comprehensive income(loss)</b>	<b>Exchange differences</b>	<b>Business combination and others</b>	
Defined benefit liabilities	₩ 120,206	₩ 17,015	₩ 703	₩ -	₩ -	₩ 137,924
Plan assets	(114,379)	(35,503)	-	-	-	(149,882)
Provisions	312,146	269,859	-	410	-	582,415
Property, plant and equipment	108,978	(13,048)	-	4,116	-	100,046
Intangible assets	2,099	1,914	-	210	-	4,223
Investments in subsidiaries, associates and joint ventures	(27,964)	(37,022)	-	-	-	(64,986)
Government grants	139,797	55,937	-	18,944	-	214,678
Succession of assets (Property, plant and equipment)	118,637	(38,800)	-	-	-	79,837
Succession of assets (Patents)	591,260	(1,583)	-	-	-	589,677
Succession of assets (Others)	600	-	-	-	-	600
Others	67,647	193,584	5,055	1,588	-	267,874
	<u>₩ 1,319,027</u>	<u>₩ 412,353</u>	<u>₩ 5,758</u>	<u>₩ 25,268</u>	<u>₩ -</u>	<u>₩ 1,762,406</u>
Consolidation adjustment	₩ 800	₩ -	₩ 32,824	₩ -	₩ -	₩ 33,624
Tax credit carryforwards	7,837	(7,837)	-	-	-	-
Tax loss carryforwards	970	(970)	-	-	-	-
Deferred tax assets (liabilities)	<u>₩ 1,328,634</u>	<u>₩ 403,546</u>	<u>₩ 38,582</u>	<u>₩ 25,268</u>	<u>₩ -</u>	<u>₩ 1,796,030</u>

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(4) The reconciliations between income tax expense and accounting profit for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Net profit before tax(*)	₩ 995,314	₩ 777,184
Tax at domestic tax rates	209,646	232,513
Tax effects:		
Income not subject to tax	(1,162)	(8,110)
Expenses not deductible for tax purposes	83,347	69,124
Effect of deferred tax recognition on temporary differences in prior periods	(47,874)	(128,034)
Effect of non-recognition of deferred tax on temporary differences	59,372	(6,773)
Effect of changes of deferred tax due to tax credits carryforwards	(189,183)	-
Tax credit	(37,751)	(142,433)
Effect of tax rate change	41,938	-
Others	97,155	60,236
Income tax expense	<u>₩ 215,488</u>	<u>₩ 76,523</u>
Effective tax rate(income tax expense/profit before tax)	21.65%	9.85%

(\*) The amount represents before taking into consideration of the profit or loss from discontinued operations.

(5) The future feasibility of deferred tax assets depends on a variety of factors, including the Group's ability to generate taxable income during the period when the temporary difference is realized, the overall economic environment, and industry prospects. The Group reviews these factors periodically.

(6) Temporary differences that have not been recognized as deferred tax assets (liabilities) as of December 31, 2022 are ₩439,867 million related to investments in subsidiaries, associates, and joint ventures, and ₩276,971 million related to unused tax loss carryforwards (as of December 31, 2021, were ₩1,679,779 and ₩320,225 million, respectively).

(7) The maturity of unused tax loss as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Less than 1 year	₩ 169	₩ -
Between 1 – 2 years	5,956	-
Between 2 – 5 years	51,423	-
Over 5 years	₩ 219,423	₩ 320,225

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**28. EARNINGS PER SHARE:**

Basic earnings per share are calculated by dividing the earnings attributable to ordinary shares of the Parent Company by the number of shares issued.

Basic earnings per ordinary share from continuing operations (Korean won in millions and in number of shares):

	<u>2022</u>	<u>2021</u>
Profits from continuing operations attributable to ordinary shares	₩ 767,236	₩ 607,343
Weighted-average number of ordinary shares outstanding	<u>232,043,836</u>	<u>200,000,000</u>
Basic earnings per ordinary share from continuing operations (in Korean won)	<u>₩ 3,306</u>	<u>₩ 3,036</u>

Basic earnings per ordinary share (Korean won in millions and in number of shares):

	<u>2022</u>	<u>2021</u>
Profits attributable to ordinary shares	₩ 767,236	₩ 792,519
Weighted-average number of ordinary shares outstanding	<u>232,043,836</u>	<u>200,000,000</u>
Basic earnings per ordinary share (in Korean won)	<u>₩ 3,306</u>	<u>₩ 3,963</u>

The Group did not issue any potential ordinary shares. Therefore, basic earnings per share are identical to diluted earnings per share.

**29. DIVIDEND:**

The Group did not pay any dividends for the accounting period ended December 31, 2022.

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**30. RELATED-PARTY TRANSACTIONS:**

- (1) As of December 31, 2022, the parent company is LG Chem Ltd. (percentage of ownership: 81.84%), over which LG Corp. exercises a significant influence.
- (2) Details of other related parties that have sales and other transactions with the Group or have receivable and payable balances, other than associates and joint ventures (see Note 10) as of December 31, 2022, are as follows:

Related party	Related-party's subsidiary (Domestic)	Related-party's subsidiary (Overseas)	Details
LG Chem Ltd.	HAENGBOKNURI CO., LTD. and others	LEYOU NEW ENERGY MATERIALS (WUXI) Co.,Ltd and others	Subsidiary of LG Chem Ltd.
D&O Co., Ltd. (formerly S&I Corp.)	D&O CM, Ltd. (formerly S&I CM, Ltd.)	D&O CM NANJING (formerly S&I CM NANJING Co., Ltd.) and others	
LG CNS Co., Ltd.	Biz Tech I Co., Ltd. (formerly Biz Tech Partners Co., Ltd.) and others	LG CNS America Inc. and others	Subsidiary of LG Corp.
LG Management Development Institute			
LG Display Co., Ltd.	Nanum nuri Co., Ltd.	LG Display (China) Co., Ltd. and others	LG Enterprise group (*)
LG Electronics, Inc.	LG Innotek Co., Ltd. and others	LG Electronics Philippines, Inc. and others	
LG Household & Health Care Ltd.	Coca-Cola Beverage Co. and others	LG Household & Health Care Trading(Shanghai) Co., Ltd. and others	
LG Uplus Corp.	LG HelloVision Corp	LG UPLUS FUND I LLC. and others	
GIIIR Inc.	HS AD Inc.	GIIR America Inc. and others	

(\*) Although these entities are not the related parties of the Group in accordance with K-IFRS 1024, these entities belong to a large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

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(3) Transactions with related parties for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	2022				
	Sales and others	Purchase and others			Others
		Purchase of raw materials /merchandises	Acquisition of property, plant and equipment and intangible assets	Interest expense	
<b>Parent:</b>					
LG Chem Ltd.	₩ 5,488	₩ 2,312,580	₩ 98	₩ 47	₩ 8,148
<b>Associates and joint ventures:</b>					
PT. HLI Green Power	45,987	-	-	-	-
VINFAST LITHIUM BATTERY PACK LLC	4,969	-	-	-	-
<b>Other related parties:</b>					
LG Corp.	-	-	1,273	-	51,212
LG Chem America, Inc.	-	-	-	-	5
LG Chem (Taiwan), Ltd.	-	-	-	5	-
LG Chem (China) Investment Co., Ltd.	-	79	-	-	171
LG Chem Europe GmbH	-	-	-	-	43
HAENGBOKNURI CO., LTD.	13	51	-	-	1,087
LEYOU NEW ENERGY MATERIALS (WUXI) Co., Ltd.	-	2,059,808	-	-	45
Techwin, Inc	-	-	106	-	89
LG Chem Hangzhou Advanced Materials Co., Ltd.	-	15,006	-	-	-
LG Chem Poland Sp. z o.o	-	201,801	-	-	8
LG Management Development Institute	-	-	-	-	19,227
D&O Co., Ltd. and its subsidiaries	81	-	17,637	-	2,769
LG CNS Co., Ltd. and its subsidiaries	20,263	95	500,521	-	116,066
Others	-	-	-	-	3,198
<b>Others:</b>					
LG Display Co., Ltd. and its subsidiaries	7	-	-	13	-
LG Electronics Inc. and its subsidiaries	1,106,703	375,782	524,010	-	22,794
LX Holdings., Ltd. and its subsidiaries (*1)	262	58,703	79,157	9	146,434
Xi C&A (formerly S&I Construction) and its subsidiaries (*2)	-	16	297,622	-	391
S&I Corporation (*2)	-	5,980	43,815	-	34,959
Others	34	-	2,657	-	3,863
	<u>₩ 1,183,807</u>	<u>₩ 5,029,901</u>	<u>₩ 1,466,896</u>	<u>₩ 74</u>	<u>₩ 410,509</u>

(\*1) Excluded from the large enterprise group after their separation from LG Group during the current year. The amount includes transactions before the separation.

(\*2) During the current year, the entity was reclassified from a subsidiary of D&O Co., Ltd. to an associate, due to the sale of its shares. The amount includes the transactions prior to its reclassification as an associate.

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	2021					
	Purchase and others					
	Sales and others	Purchase of raw materials /merchandises	Acquisition of property, plant and equipment and intangible assets	Interest expense	Others	
<b>Parent:</b>						
LG Chem Ltd.	₩ 45,950	₩ 1,026,354	₩ 11	₩ 64	₩ 13,556	
<b>Associate and joint venture:</b>						
PT. HLI Green Power	19,151	-	-	-	-	
VINFAST LITHIUM BATTERY PACK LLC.	6,483	-	-	-	-	
Jiangxi VL Battery Co., Ltd	530	-	-	-	-	
HL Greenpower Co., Ltd.	386,838	-	-	-	-	
<b>Other related parties:</b>						
LG Corp.	-	-	-	-	36,018	
LG Chem America, Inc.	-	-	-	-	8	
LG Chem (Taiwan), Ltd.	5,828	-	-	-	560	
LG Chem Display Materials (Beijing) Co., Ltd.	5,113	-	-	-	-	
LG Chem (China) Investment Co., Ltd.	-	234	21	-	1,037	
LG Chem Europe GmbH	486	434	-	-	340	
HAENGBOKNURI CO., LTD.	16	-	-	-	1,816	
LG Chem (Guangzhou) Information & Electronics Materials Co., Ltd.	11,419	9,989	-	-	-	
LEYOU NEW ENERGY MATERIALS(WUXI) Co., Ltd.	1	613,750	-	-	-	
TECWIN Co., Ltd.	-	-	8,365	-	173	
LG Chem Hangzhou Advanced Materials Co., Ltd.	-	26,990	-	-	-	
LG Chem Poland Sp. z o.o.	10	11,962	-	-	-	
LG Management Development Institute	-	-	-	-	12,484	
D&O Co., Ltd. and its subsidiaries	78	12,544	347,111	-	65,558	
LG CNS Co., Ltd. and its subsidiaries	13,749	583	234,893	-	99,721	
Others	-	54	54	-	3,077	
<b>Others:</b>						
LG Display Co., Ltd. and its subsidiaries	1,212	-	-	250	-	
LG Electronics Inc. and its subsidiaries	667,459	918,814	302,046	-	58,670	
LX Holdings., Ltd. and its subsidiaries (*)	244	191,008	27,308	1	202,324	
Others	37	-	797	-	4,726	
	<u>₩ 1,164,604</u>	<u>₩ 2,812,716</u>	<u>₩ 920,606</u>	<u>₩ 315</u>	<u>₩ 500,068</u>	

(\*) This includes entities whose holding company is LX Holdings., Ltd., resulting from its spin-off during the previous year.

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(4) Balances of receivables and payables from related parties as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	December 31, 2022													
	Receivables			Payables										
	Trade receivables	Other receivables	Total	Trade payables	Lease liabilities	Other payables	Total							
<b>Parent:</b>														
LG Chem Ltd.	₩	- ₩	23,163 ₩	₩	23,163 ₩	₩	571,271 ₩	₩	1,650 ₩	₩	2,904 ₩	₩	575,825	
<b>Associates and joint ventures:</b>														
PT. HLI Greenpower		-	1,311	1,311	-	-	-	-	-	88,093	88,093		88,093	
<b>Other related parties:</b>														
LG Corp.		-	46	46	-	-	-	-	-	18,727	18,727		18,727	
LG Chem (Taiwan), Ltd.		-	-	-	-	-	106	41	147				147	
LG Chem (China) Investment Co., Ltd.		-	-	-	-	-	-	48	48				48	
LG Chem Europe GmbH		-	-	-	-	-	-	1	1				1	
HAENGBOKNURI CO., LTD.		-	1	1	-	-	-	120	120				120	
LEYOU NEW ENERGY MATERIALS(WUXI) Co., Ltd.		-	-	-	316,606	-	-	26	316,632				316,632	
TECWIN Co., Ltd.		-	-	-	-	-	-	54	54				54	
LG Chem Poland Sp. z o.o.		-	-	-	59,336	-	-	1	59,337				59,337	
LG Management Development Institute		-	-	-	-	-	-	544	544				544	
D&O Co., Ltd. and its subsidiaries		-	-	-	-	-	-	3,957	3,957				3,957	
LG CNS Co., Ltd. and its subsidiaries		5,782	205	5,987	526	-	-	335,380	335,906				335,906	
Others		-	-	-	-	-	-	363	363				363	
<b>Others:</b>														
LG Display Co., Ltd. and its subsidiaries		-	-	-	-	-	454	17	471				471	
LG Electronics Inc. and its subsidiaries (*1)		275,784	26,322	302,106	77,580	-	-	142,674	220,254				220,254	
Xi C&A (formerly S&I Construction) and its subsidiaries (*2)		-	-	-	-	-	-	125,451	125,451				125,451	
S&I Corporation (*2)		-	-	-	-	-	-	48,679	48,679				48,679	
Others		-	561	561	-	-	-	3,930	3,930				3,930	
	₩	281,566	₩	51,609	₩	333,175	₩	1,025,319	₩	2,210	₩	771,010	₩	1,798,539

(\*1) Provisions for GM Bolt recall is not included in the balance of receivables and payables above.

(\*2) During the current year, the entity was reclassified from a subsidiary of D&O Co., Ltd. to an associate, due to the sale of its shares. The amount includes the transactions prior to its reclassification as an associate.

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	<b>December 31, 2021</b>						
	<b>Receivables</b>			<b>Payables</b>			
	<b>Trade receivables</b>	<b>Other receivables</b>	<b>Total</b>	<b>Trade payables</b>	<b>Lease liabilities</b>	<b>Other payables</b>	<b>Total</b>
<b>Parent:</b>							
LG Chem Ltd.	₩ 3,382	₩ 42,877	₩ 46,259	₩ 183,965	₩ 2,524	₩ 6,416	₩ 192,905
<b>Associates and joint ventures:</b>							
PT. HLI Green Power	-	-	-	-	-	134,054	134,054
VINFAST LITHIUM BATTERY PACK LLC	463	-	463	-	-	-	-
Jiangxi VL Battery Co., Ltd	-	4,109	4,109	-	-	-	-
<b>Other related parties:</b>							
LG Corp.	-	42	42	-	-	10,907	10,907
LG Chem (China) Investment Co., Ltd.	-	-	-	-	-	585,928	585,928
LG Chem Europe GmbH	-	112	112	-	-	318	318
HAENGBOKNURI CO., LTD.	-	-	-	-	-	93	93
LEYOU NEW ENERGY MATERIALS (WUXI) Co., Ltd.	-	1	1	121,325	-	-	121,325
TECWIN Co., Ltd.	-	-	-	317	-	16,095	16,412
LG Chem Hangzhou Advanced Materials Co., Ltd.	-	-	-	41,812	-	-	41,812
LG Chem Poland Sp. z o.o.	-	-	-	14,495	-	-	14,495
LG Management Development Institute	-	2,784	2,784	-	-	487	487
S&I Corp. and its subsidiaries	-	3,066	3,066	-	-	205,161	205,161
LG CNS Co., Ltd. and its subsidiaries	5,861	-	5,861	-	-	180,627	180,627
Others	-	-	-	-	-	499	499
<b>Others:</b>							
LG Display Co., Ltd. and its subsidiaries	-	-	-	-	360	30	390
LG Electronics Inc. and its subsidiaries (*1)	100,186	23,529	123,715	71,148	-	103,625	174,773
LX Holdings., Ltd. and its subsidiaries (*2)	-	10	10	-	-	59,927	59,927
Others	-	-	-	-	-	3,925	3,925
	<u>₩ 109,892</u>	<u>₩ 76,530</u>	<u>₩ 186,422</u>	<u>₩ 433,062</u>	<u>₩ 2,884</u>	<u>₩ 1,308,092</u>	<u>₩ 1,744,038</u>

(\*1) Provisions for GM Bolt recall is not included in the balance of receivables and payables above.

(\*2) This includes entities whose holding company is LX Holdings., Ltd., resulting from its spin-off during the previous year.

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(5) Fund transactions with related parties for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	2022							
	Dividends received	Dividends paid	Equity contribution in cash and others	Loans transaction		Borrowings transaction(*1)		
				Loans	Repayment	Borrowings	Repayment	
<b>Parent:</b>								
LG Chem Ltd.	₩	- ₩	- ₩	- ₩	- ₩	- ₩	- ₩	827
<b>Other related parties:</b>								
LG Chem (Taiwan), Ltd.		-	-	-	-	-	-	187
<b>Others:</b>								
LG DISPLAY AMERICA, INC		-	-	-	-	-	-	176
LX Pantos Poland sp. z.o.o (*2)		-	-	-	-	-	62	7
Pantos Logistics Mexico S.A. de C.V (*2)		-	-	-	-	-	2,384	320
LX PANTOS TURKEY LOJISTIK (*2)		-	-	-	-	-	337	41
	₩	- ₩	- ₩	- ₩	- ₩	- ₩	2,783 ₩	1,558

(\*1) The amounts represent lease liabilities that were recognized or repaid during the current year.

(\*2) Excluded from the large enterprise group after their separation from LG Group during the current year. The amount includes transactions before the separation.

	2021							
	Dividends received	Dividends paid	Equity contribution in cash and others	Loans transaction		Borrowings transaction(*)		
				Loans	Repayment	Borrowings	Repayment	
<b>Parent:</b>								
LG Chem Ltd.	₩	- ₩	- ₩	- ₩	- ₩	- ₩	- ₩	994
<b>Associates and joint ventures:</b>								
PT. HLI Green Power		-	209,132	-	-	-	-	-
<b>Other related party:</b>								
LG Chem (Taiwan), Ltd.		-	-	-	-	-	792	156
<b>Others:</b>								
LG DISPLAY AMERICA, INC		-	-	-	-	-	-	149
Pantos Logistics France S.A.R.L		-	-	-	-	-	-	419
Pantos Logistics Spain S.L.U.		-	-	-	-	-	-	161
	₩	- ₩	- ₩	209,132 ₩	- ₩	- ₩	792 ₩	1,879

(\*) The amounts represent lease liabilities that were recognized or repaid during the previous year.

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(6) Compensation for key management of the Group for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

	<b>2022</b>		<b>2021</b>	
Short-term employee benefits	₩	46,611	₩	40,070
Retirement benefits		4,944		12,763
	₩	51,555	₩	52,833

Key management includes directors (including non-executive) having duties and responsibilities over planning, operations and controlling of the Group's business activities.

(7) There are no provisions recognized against receivables from related parties as of December 31, 2022. Therefore, there is no bad debt expense recognized for the year ended December 31, 2022.

(8) As of the end of this year, the amount of guarantees provided by the Group for related parties is disclosed in Note 18.

(9) In the previous year, LG Energy Solution (Nanjing) Co., Ltd., a subsidiary of the Group, conducted paid-in capital reduction. This year, the subsidiary has paid ₩604,437 million this year to LG Chem (China) Investment Co., Ltd., a related party.

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**31. CONSOLIDATED STATEMENTS OF CASH FLOWS:**

(1) Details of cash generated from operations for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Profit before income tax:		
Profit before income tax from continuing operations	₩ 995,314	₩ 777,184
Profit before income tax from discontinued operations	-	275,102
	<u>995,314</u>	<u>1,052,286</u>
Adjustments for:		
- Depreciation	₩ 1,745,493	₩ 1,378,651
- Amortization	97,220	73,128
- Retirement benefits	77,775	71,206
- Financial income	(491,512)	(205,524)
- Financial costs	594,211	197,555
- Foreign currency conversion differences	2,910	(29,699)
- Loss on valuations of inventories	20,169	99,435
- Gain on disposal of property, plant and equipment	(678)	(6,416)
- Loss on disposal of property, plant and equipment	61,731	40,781
- Loss on disposal of intangible assets	244	93
- Impairment losses on property, plant and equipment and intangible assets	1,450	-
- Gain on disposal of business	-	(243,740)
- Gain on disposal of investments in associates	-	(3,820)
- Gain on bargain purchase	(30,673)	-
- Contribution to provisions	642,667	1,469,962
- Other income (loss)	43,906	2,290
- Changes in inventories	(3,139,374)	(833,329)
- Changes in trade receivables	(2,129,797)	139,012
- Changes in other receivables	371,123	(712,845)
- Changes in other current assets	(321,960)	(13,446)
- Settlement of derivatives	7,336	-
- Changes in trade payables	1,841,424	(567,542)
- Changes in other payables	517,172	95,115
- Changes in other current liabilities	337,003	229,884
- Changes in provisions	(1,261,000)	(604,136)
- Changes in net defined benefit liabilities	(225,876)	(116,663)
- Other cash flows from operations	(17,118)	63,630
Cash generated from operations	<u>₩ (260,840)</u>	<u>₩ 1,575,868</u>

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(2) Changes in liabilities arising from financial activities for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>2022</b>						
	<u>Beginning</u>	<u>Cash flows from financing activities</u>	<u>Reclassification of current portion</u>	<u>Amortization</u>	<u>Lease liabilities</u>	<u>Others</u>	<u>Ending</u>
Short-term borrowings	₩ 2,203,376	₩ (188,490)	₩ 947,631	₩ -	₩ -	₩ (770,894)	₩ 2,191,623
Long-term borrowings	2,720,009	1,108,532	(947,631)	-	75,699	825,987	3,782,596
Debentures	2,045,808	-	-	3,443	-	85,783	2,135,034
Accounts payable	585,928	(604,437)	-	-	-	18,509	-
	<u>₩ 7,555,121</u>	<u>₩ 315,605</u>	<u>₩ -</u>	<u>₩ 3,443</u>	<u>₩ 75,699</u>	<u>₩ 159,385</u>	<u>₩ 8,109,253</u>

  

	<b>2021</b>						
	<u>Beginning</u>	<u>Cash flows from financing activities</u>	<u>Reclassification of current portion</u>	<u>Amortization</u>	<u>Lease liabilities</u>	<u>Others</u>	<u>Ending</u>
Short-term borrowings	₩ 1,123,038	₩ (374,377)	₩ 1,125,054	₩ -	₩ -	₩ 329,661	₩ 2,203,376
Long-term borrowings	3,092,585	930,670	(1,125,054)	-	94,002	(272,194)	2,720,009
Debentures	1,943,701	-	-	3,231	-	98,876	2,045,808
	<u>₩ 6,159,324</u>	<u>₩ 556,293</u>	<u>₩ -</u>	<u>₩ 3,231</u>	<u>₩ 94,002</u>	<u>₩ 156,343</u>	<u>₩ 6,969,193</u>

(3) Significant non-cash transactions for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Reclassification of construction in progress	₩ 4,524,611	₩ 2,641,261
Reclassification of machinery in transit	38,534	40,646
Reclassification of long-term borrowings into current portion	947,631	1,125,054
Reclassification of debentures into current portion	675,078	-
Changes in other payables related to acquisitions of property, plant and equipment and intangible assets	262,792	331,776

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**32. SEGMENT INFORMATION:**

(1) General information about the Group's reportable segments is as follows:

<u>Segment</u>	<u>Products or services</u>	<u>Major customers</u>
Energy solution (*)	Automotive batteries, mobile batteries , ESS batteries and others	HP, GM and others

(\*) The Group has determined the reporting segment as a single reporting segment based on the performance evaluation reported to the board of directors, the chief operating decision maker.

(2) Segment information on revenue and profit for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

	<u>2022</u>	<u>2021</u>
Total segment revenue	₩ 25,598,609	₩ 17,851,906
Revenue from external customers (*1)	25,598,609	17,851,906
Operating profit of reportable segment (*2)	1,213,719	768,470

(\*1) Revenue from external customers consists of sales of goods. Interest income and dividend income are included in finance income.

(\*2) Management assesses the performance of the operating segments based on a measurement of operating profit of segment.

(3) Segment information on assets and liabilities as of December 31, 2022 and 2021, is as follows (Korean won in millions):

	<u>December 31, 2022</u>			<u>December 31, 2021</u>		
	<u>Investments in associates and joint ventures</u>		<u>Liabilities</u>	<u>Investments in associates and joint ventures</u>		<u>Liabilities</u>
	<u>Assets</u>			<u>Assets</u>		
Reportable segment assets and liabilities	₩ 38,299,445	₩ 203,696	₩ 17,705,683	₩ 23,764,137	₩ 225,567	₩ 15,021,764

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(4) Sales for the years ended December 31, 2022 and 2021, and non-current assets as of December 31, 2022 and 2021, by geographical segments, are as follows (Korean won in millions):

	<b>Sales</b>		<b>Non-current assets (*1)</b>	
	<b>2022</b>	<b>2021</b>	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Korea (*2)	₩ 1,349,928	₩ 2,235,338	₩ 3,243,244	₩ 2,466,332
China	6,067,389	2,910,541	3,786,273	3,623,783
Asia/Oceania	1,451,499	1,110,368	923	1,035
America	7,075,353	2,827,944	4,670,440	1,565,579
Europe	9,654,428	8,767,715	4,485,299	4,073,733
Africa	12	-	-	-
	<u>₩ 25,598,609</u>	<u>₩ 17,851,906</u>	<u>₩ 16,186,179</u>	<u>₩ 11,730,462</u>

(\*1) Represents aggregate amount of property, plant and equipment; intangible assets; and investment properties.

(\*2) Domestic sales include exports made through local letters of credit.

(5) For the year ended December 31, 2022, revenues from external customers who account for 10% or more of the Group's revenue amounted to ₩4,858,634 million, ₩3,244,739 million, and ₩2,607,959 million, respectively (the year ended December 31, 2021, were ₩2,341,999 million, ₩2,579,478 million, and ₩1,232,094 million).

**33. ASSETS AND LIABILITIES RELATED TO CONTRACTS WITH CUSTOMERS:**

(1) Assets and liabilities related to contracts with customers as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
<b>Contract assets:</b>		
Due from customers	₩ 11,570	₩ -
	<u>₩ 11,570</u>	<u>₩ -</u>
<b>Contract liabilities:</b>		
Advances from customers received as part of the Group's main business activities	₩ 282,418	₩ 285,496
Expected customer incentives	2,497	3,042
Unearned revenue	112,240	136,642
Due to customers	14,315	-
	<u>₩ 411,470</u>	<u>₩ 425,180</u>

(2) Revenue recognized in relation to contract liabilities

Revenues recognized from the carried-forward contract liabilities for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	<b>2022</b>	<b>2021</b>
<b>Revenue recognized in the current period from the beginning contract liabilities:</b>		
Revenues in relation to advances from customers received as part of the Group's main business activities	₩ 107,252	₩ 134,731
Unearned revenue	46,078	127
	<u>₩ 153,330</u>	<u>₩ 134,858</u>

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**34. INVESTMENT PROPERTIES:**

(1) Details of investment properties as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	December 31, 2022				December 31, 2021			
	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value
Buildings	₩ 290,437	₩ (75,916)	₩ (1,724)	₩ 212,797	₩ 301,254	₩ (76,630)	₩ (460)	₩ 224,164
Land	283	(3)	(35)	245	161	-	-	161
	<u>₩ 290,720</u>	<u>₩ (75,919)</u>	<u>₩ (1,759)</u>	<u>₩ 213,042</u>	<u>₩ 301,415</u>	<u>₩ (76,630)</u>	<u>₩ (460)</u>	<u>₩ 224,325</u>

(2) Changes in investment properties for the year ended December 31, 2022 and 2021, are as follows (Korean won in millions):

	2022		2021	
	Land	Building	Land	Building
Beginning	₩ 161	₩ 224,164	₩ -	₩ 255,086
Acquisition/transfer	122	7,160	161	-
Disposal/transfer	-	(11,320)	-	(24,851)
Depreciation	(3)	(5,878)	-	(6,071)
Impairment	(35)	(1,329)	-	-
Ending	<u>₩ 245</u>	<u>₩ 212,797</u>	<u>₩ 161</u>	<u>₩ 224,164</u>

(3) The fair value of investment properties is measured either by independent professional appraisers with certified qualification or measured based on official appraised value of land and available information from recent transactions of similar properties, and it is classified as 'Level 3' of the fair value hierarchy. The fair value of investment properties as of December 31, 2022, is ₩245,471 million (as of December 31, 2021, was ₩258,152 million). Rental income from investment properties under operating lease for the year ended December 31, 2022, is ₩12,575 million, and operating expenses incurred for investment properties that generated rental income (including maintenance and repair expenses) for the year ended December 31, 2022, are ₩5,881 million.

(4) Operating lease

Investment properties are leased to tenants under operating leases with monthly rent payments. Where considered necessary to reduce credit risk, the Group may obtain bank guarantees for the term of the lease.

Although the Group is exposed to changes in the residual value at the end of the current leases, the Group typically enters into new operating leases and, therefore, will not immediately realize any reduction in residual value at the end of these leases. Expectations about the future residual values are reflected in the fair value of investment properties.

The future minimum lease payments expected to be received in relation to the above operating lease agreement for investment properties as of December 31, 2022 and 2021, are as follows (Korean won in millions):

	December 31, 2022	December 31, 2021
Less than 1 year	₩ 11,858	₩ 12,357
Between 1 – 2 years	160	12,355
Between 2 – 5 years	478	-
	<u>₩ 12,496</u>	<u>₩ 24,712</u>

**LG Energy Solution, Ltd. and its subsidiaries**  
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**35. BUSINESS COMBINATION:**

(1) On February 28, 2022, the Group acquired 100% shares of LG Energy Solution Vertech Inc., a provider of installation services for Energy Storage System (ESS) in the United States. As a result of the business combination, the Group expects to increase sales through expanded vertical integration by strengthening contact points with ESS customers.

1) The consideration transferred to LG Energy Solution Vertech Inc. and the values of assets and liabilities acquired at the acquisition date are as follows (Korean won in millions).

2) The bargain purchase difference of ₩30,673 million arising from the acquisition is recognized as other non-operating income item in the consolidated statements of profit or loss.

	<u>Amount</u>
Consideration	
Cash and cash equivalents	₩ 16,168
	<u>₩ 16,168</u>
<b>Accumulated amount of acquired assets and assumed liabilities</b>	
Cash and cash equivalents	₩ 7,748
Trade receivables and other receivables (*)	56,333
Inventories	5,477
Property, plant and equipment	7,251
Intangible assets	1,503
Other assets	12,295
Trade payables and other payables	(25,859)
Other liabilities	(15,543)
Deferred tax liabilities	(2,364)
Fair value of acquired net assets	46,841
Goodwill (gain on bargain purchase)	<u>(30,673)</u>
	<u>₩ 16,168</u>

(\*) The fair value of trade receivables and other receivables is equal to the contractual amount.

3) Sales and net loss of LG Energy Solution Vertech Inc. after the acquisition date reflected in the consolidated statements of profit or loss were ₩60,224 million and ₩23,881 million, respectively.

4) If LG Energy Solution Vertech Inc. had been consolidated from January 1, 2022, the Group's sales and net income would have been recorded in the consolidated statements of comprehensive income as ₩25,597,927 million and ₩759,062 million, respectively.

5) The Group's accounting for business combinations reported provisional amounts as of December 31, 2022, and may be adjusted if there is new information about the facts and circumstances related to the business combination within the measurement period within one year from the acquisition date.

**36. EVENT AFTER THE REPORTING PERIOD:**

The Group has entered into a long-term supply agreement for electric vehicle battery modules with U.S. FEPS(Freudenberg E-Power Systems) in February 2023, to secure market opportunities in the commercial vehicle (e.g., buses and trucks) industry with expected high future growth potential.

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**Notes to the consolidated financial statements**  
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**37. DATE OF APPROVAL FOR ISSUANCE OF CONSOLIDATED FINANCIAL STATEMENTS:**

The Group's consolidated financial statements were approved by the board of directors on January 26, 2023 and may be revised at the general meeting of shareholders.

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