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SK hynix Inc.

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

US$500,000,000 3.000% Notes due 2024

The US$500,000,000 3.000% Notes due 2024 (the "Notes") of SK hynix Inc. (the "Company") will mature on September 17, 2024 (the "Maturity Date"). The Notes will bear interest at the rate of 3.000% per annum from, and including, September 17, 2019 to, but excluding, the Maturity Date. Interest will be payable semi-annually in arrears on March 17 and September 17 of each year, commencing March 17, 2020. The Company may, at its 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 "Description of the Notes — Optional Tax Redemption."

The Notes will be unsecured and will be the direct, unconditional and unsubordinated general obligations of the Company and will rank *pari passu* among themselves and at least equally with all other outstanding unsecured and unsubordinated general obligations of the Company, except as may be required by mandatory provisions of law.

Approval in-principle has been received from the Singapore Exchange Securities Trading Limited (the "SGX-ST") for the listing and quotation of the Notes on the SGX-ST. The SGX-ST 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 SGX-ST are not to be taken as an indication of the merits of the Company or the Notes.

The Notes are expected to be rated "Baa2" by Moody's Investors Service, 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.

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 directly or indirectly 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 outside the United States in offshore transactions in reliance on Regulation S under the Securities Act ("Regulation S") and in compliance with applicable laws, regulations and directives. For further details about eligible offers and resale restrictions, see "Subscription and Sale."

Investing in the Notes involves risks. See "Risk Factors" beginning on page 10 to read about certain risk factors you should consider before investing in the Notes.

Issue Price: 99.279%

(plus accrued interest, if any, from September 17, 2019)

Delivery of the Notes in book-entry form will be made on or about September 17, 2019.

Joint Bookrunners and Lead Managers

BNP PARIBAS **Citigroup** **Credit Suisse**

The date of this Offering Circular is September 10, 2019.

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You should rely only on the information contained in this Offering Circular. The Company has not authorized anyone to provide you with information that is different. This Offering Circular may only be used where it is legal to sell these securities. The information in this Offering Circular may only be accurate as of the date of this Offering Circular.

IN CONNECTION WITH THIS OFFERING, TO THE EXTENT PERMITTED BY, AND IN ACCORDANCE WITH, APPLICABLE LAWS AND REGULATIONS, ANY OF THE INITIAL PURCHASERS APPOINTED AS A STABILIZATION MANAGER (THE "STABILIZATION MANAGER") (OR PERSONS ACTING ON BEHALF OF THE STABILIZATION MANAGER) 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. HOWEVER, THERE IS NO ASSURANCE THAT THE STABILIZATION MANAGER (OR PERSONS ACTING ON BEHALF OF THE STABILIZATION MANAGER) WILL UNDERTAKE SUCH STABILIZATION. ANY STABILIZATION 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.

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 THE REGULATIONS THEREUNDER) OR TO OTHERS FOR RE-OFFERING OR RESALE, DIRECTLY OR INDIRECTLY, IN KOREA OR TO ANY RESIDENTS 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 KOREAN QUALIFIED INSTITUTIONAL BUYER (A "KOREAN QIB," AS DEFINED IN THE REGULATION ON ISSUANCE, PUBLIC DISCLOSURE, ETC. OF SECURITIES 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% OF THE AGGREGATE ISSUE AMOUNT OF THE NOTES.

No person has been authorized in connection with any offering of the Notes to give any information or make any representation other than as contained in this Offering Circular and, if given or made, such information or representation must not be relied upon as having been authorized by the Company, by any Agent (as defined in the "Terms and Conditions of the Notes") or by the Initial Purchasers (as defined in "Subscription and Sale"). This Offering Circular does not constitute an offer to sell or a solicitation of an offer to buy any Notes by any person except in compliance with all applicable laws and regulations. No representation or warranty, express or implied, is made by the Initial Purchasers or any of their affiliates or advisors, or any Agent, as to the accuracy or completeness of the information contained in this Offering Circular, and nothing contained in this Offering Circular is, or shall be relied upon as, a promise or representation by the Initial Purchasers or their affiliates or advisors, or any Agent. 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 the Company's affairs since the date of this Offering Circular. Each Initial Purchaser and each Agent 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 the Company in connection with the offering or any other such statement. Each person receiving this Offering Circular acknowledges that such person has not relied on the Initial Purchasers or any of their affiliates or advisors in connection with investigation of the accuracy of such information or such person's investment decisions.

The Notes have not been registered with or approved or disapproved by the U.S. Securities and Exchange Commission, any state securities commission or other regulatory authority, nor has any of the foregoing authorities passed upon or endorsed the merits of this offering or the accuracy or adequacy of this Offering Circular. Any representation to the contrary is a criminal offense.

MiFID II product governance / Professional investors and ECPs 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 eligible counterparties and professional clients, each as defined in Directive 2014/65/EU (as amended, "MiFID II"); and (ii) all channels for distribution of the Notes to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a "distributor") should take into consideration the manufacturer's target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturer's target market assessment) and determining appropriate distribution channels, subject to the distributor's suitability and appropriateness obligations under MiFID II, as applicable.

Notification under Section 309B(1)(c) of the Securities and Futures Act, Chapter 289 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).

This Offering Circular does not constitute, and may not be used for purposes of, an offer, invitation or solicitation by anyone in any jurisdiction or in any circumstances in which such offer, invitation or solicitation is not authorized or to any person to whom it is unlawful to make such offer, invitation or solicitation. The distribution of this Offering Circular and the offering of the Notes in certain jurisdictions may be restricted by law. Persons into whose possession this Offering Circular may come are required by the Company and the Initial Purchasers to inform themselves about and to observe the relevant restrictions. For a description of certain restrictions on offers and sales of the Notes and distribution of this Offering Circular, see "Subscription and Sale." No action is being taken in any jurisdiction to permit an offering to the general public of Notes or the distribution of this Offering Circular in any jurisdiction where action would be required for those purposes.

In making an investment decision, prospective investors must rely on their own examination of the Company and the terms of the offering of the Notes, including the merits and risks involved. The Company is not and no Agent 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. The contents of this Offering Circular should not be construed as providing legal, business, accounting or tax advice.

CERTAIN DEFINED TERMS AND CONVENTIONS

References to "Korea" or the "Republic" are references to The Republic of Korea. References to the "Government" are references to the government of the Republic of Korea. All references to the "Issuer" or the "Company" herein are references to SK hynix Inc. and its subsidiaries, as the context requires.

In this Offering Circular, references to "Won" or "₩" are to the currency of Korea and all references to "U.S. dollars" or "US$" are to the currency of the United States of America. This Offering Circular contains a translation of certain Won amounts into U.S. dollars at specified rates solely for the convenience of the reader. These translations should not be construed as representations that the Won amounts actually represent such U.S. dollar amounts or could be converted into U.S. dollars at the rates indicated. Unless otherwise specified, all conversions of Won into U.S. dollars were made at the base rate under the market average exchange rate system, announced by Seoul Money Brokerage Services, Ltd. in Seoul, between U.S. dollars and Won, rounded to the nearest tenth of one Won (the "Market Average Exchange Rate"). Unless otherwise specified, all conversions of Won into U.S. dollars have been made at the Market Average Exchange Rate in effect on June 30, 2019, which was ₩1,156.8 to US$1.00. For a discussion of historical information regarding the rate of exchange between Won and the U.S. dollar, see "Exchange Rate Information." No representation is made that the Won or U.S. dollar amounts referred to in this Offering Circular 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.

ENFORCEABILITY OF CIVIL LIABILITIES

The Company is a corporation organized under the laws of Korea. A majority of its directors and officers and certain other persons named in this Offering Circular reside in Korea, and a significant portion of the assets of the directors and officers and certain other persons named in this Offering Circular and a substantial majority of the Company's assets are located in Korea. As a result, it may not be possible for you to effect service of process within the United States upon such persons or to enforce against them or against the Company in U.S. courts judgments predicated upon the civil liability provisions of the federal securities laws of the United States. There is doubt as to the enforceability in Korea, either in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities predicated on the U.S. federal securities laws.

PRESENTATION OF FINANCIAL INFORMATION

The Company's consolidated financial statements as of and for the years ended December 31, 2016, 2017 and 2018 included in this Offering Circular have been prepared in accordance with the Korean International Financial Reporting Standards ("K-IFRS"), which may differ in certain respects from generally accepted accounting principles in other countries, including generally accepted accounting principles in the United States and International Financial Reporting Standards applied in other countries. The Company's unaudited condensed consolidated interim financial statements as of June 30, 2019 and for the three and six months ended June 30, 2018 and 2019 included in this Offering Circular have been prepared in accordance with K-IFRS No. 1034 "Interim Financial Reporting."

All financial information, descriptions and other information regarding the Company are, unless indicated otherwise, given on a consolidated basis. Any discrepancies in the tables included in this Offering Circular between the listed amounts and totals thereof are due to rounding.

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 the 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."

The Company is one of the world's largest memory semiconductor companies and engages in the design, manufacture and sale of advanced memory semiconductors. In the dynamic random access memory ("DRAM") market, the Company is ranked number two globally based on revenue with a market share of 29.5% in 2018, according to Gartner Market Statistics ("Gartner"). In addition, the Company is the fifth largest supplier of NAND flash memory in terms of revenue, with a worldwide market share of 11.0% in 2018, according to Gartner. The Company's memory products can be used in virtually all electronic devices, including PCs, servers, graphic cards, mobile devices such as smartphones and tablets, and other consumer electronics products. The Company has also expanded its product portfolio into non-memory semiconductors, including complementary metal-oxide semiconductor ("CMOS") image sensors that are used to perform the role of electronic film in digital photographing devices such as smartphones, tablets, PC laptops and surveillance cameras, as well as engaging in the foundry business through SK hynix system IC Inc. ("SK hynix system IC"), a wholly-owned subsidiary.

The Company sells a wide variety of DRAM and NAND flash memory products with various configuration options, architectures and performance characteristics tailored to meet application- and customer-specific needs. The Company believes that it is one of the world's leading companies in developing DRAMs with advanced specifications, particularly those relating to higher density, faster data-processing speed and lower energy consumption. The Company is continually developing higher-density modules, solid-state drives ("SSDs") and other specialty DRAM and NAND flash memory products that are optimized for use in specific applications. The Company believes that offering specialty products provides opportunities to mitigate the negative effects of the cyclicality of the memory products market, and its specialty products typically command higher prices than standardized DRAMs used in PCs because of their superior performance and customized characteristics.

The Company owns and operates wafer fabrication facilities ("fabs") in Icheon and Cheongju, Korea and Wuxi, China. The Company also owns and operates assembly and testing facilities for back-end processing of its products in Icheon and Cheongju, Korea and Chongqing, China. As part of the Company's efforts to reduce unit manufacturing costs, improve manufacturing yields and enhance its profitability, the Company periodically phases out the operations of its older fabs as well as upgrading them to new fabs that implement more advanced processing technologies. In addition to regular maintenance and enhancement of existing fabs, the Company's current on-going capital expenditure projects include the construction of its M16 fab in Icheon, Korea starting in December 2018 with completion targeted for October 2020. As part of its efforts to ensure its long-term competitiveness, the Company has also announced initiatives to secure land in Yongin, Korea by 2022 in order to construct its next generation of fabs.

In order to maintain its technological leadership, as well as to access new markets for its products, the Company engages in strategic initiatives, including entering into joint ventures and joint product development and supply agreements. From time to time, the Company may also acquire equity stakes in other industry players to further strengthen its business relationships. See "Business — Strategic Alliances and Investments."

The Company's revenue was ₩17,198 billion in 2016, ₩30,109 billion in 2017 and ₩40,445 billion in 2018, and ₩19,090 billion in the first half of 2018 and ₩13,225 billion in the first half of 2019. The Company recorded profit for the year of ₩2,960 billion in 2016, ₩10,642 billion in 2017 and ₩15,540 billion in 2018, and profit for the period of ₩7,450 billion in the first half of 2018 and ₩1,639 billion in the first half of 2019. The Company had total assets of ₩63,658 billion and total equity of ₩46,852 billion as of December 31, 2018 and total assets of ₩63,032 billion and total equity of ₩47,711 billion as of June 30, 2019.

THE OFFERING

The following is a brief summary of the terms of the offering and is qualified in its entirety by the remainder of this Offering Circular. Words and expressions defined in "Terms and Conditions of the Notes" have the same meanings in this summary.

Issuer	SK hynix Inc.
Offering	US$500,000,000 3.000% Notes due 2024
Issue Price	99.279% of the principal amount of the Notes.
Issue Date	September 17, 2019
Maturity Date	September 17, 2024
Interest	3.000% per annum, from, and including, September 17, 2019 to, but excluding, the Maturity Date, payable semi-annually in arrears on March 17 and September 17 in each year. See "Terms and Conditions of the Notes — Interest."
Ranking of the Notes	The Notes constitute direct, unconditional, unsubordinated and unsecured obligations of the Company and shall at all times rank *pari passu* and without any preference or priority among themselves and with all other present and future direct, unconditional, unsubordinated and unsecured obligations of the Company, except as may be required by mandatory provisions of law. See "Terms and Conditions of the Notes — Status."
Certain Covenants	The Notes contain certain limitations on the ability of the Company to create or permit to be outstanding any mortgage, charge, lien, pledge or other security interest upon the whole or any part of its property, assets or revenues, present or future to secure certain types of indebtedness and to engage in a consolidation, merger or sale of all or substantially all of its assets. See "Terms and Conditions of the Notes — Certain Covenants."
Taxation and Additional Amounts	Payment of principal and interest in respect of the Notes, including payment of any additional amounts, by or on behalf of the Company, shall 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, levied, collected, withheld or assessed by or on behalf of the Relevant Jurisdiction, except as required by applicable law. In that event, the Company will, subject to certain exceptions and limitations, pay to a holder of any Note such additional amounts as may be necessary in order that every net payment by the Company or a paying agent of the principal of and interest on the Notes and any other amounts payable on the Notes after withholding or deduction for or on account of any present or future tax, duty, assessment or governmental charge imposed or levied by a Relevant Jurisdiction will not be less than the amount provided for in the Notes to be then due and payable thereunder. See "Terms and Conditions of the Notes — Taxation" and "Taxation — Korean Taxation."
Redemption for Taxation Reasons	Prior to the Maturity Date, the Notes will be redeemable at the option of the Company at any time in whole, but not in part, at 100% of their principal amount plus accrued and unpaid interest, if any, to the date fixed for redemption, in the event of certain changes in the tax law of the Relevant Jurisdiction. See "Terms and Conditions of the Notes — Redemption and Purchase — Redemption for Taxation Reasons."
Change of Control	Noteholders will have the right to require the Company to redeem all or any part of their Notes at a purchase price equal to 100% of their principal amount plus accrued and unpaid interest, if any, to the date of redemption, upon the occurrence of a Change of Control Triggering Event as described under "Terms and Conditions of the Notes — Redemption and Purchase — Change of Control Put Right."
Further Issuances	The Company may from time to time, without notice to or the consent of the holders of the Notes, create and issue further debt securities ranking *pari passu* with the Notes in all respects so that such further issue shall be consolidated and form a single series with the outstanding Notes.
Listing	Approval in-principle has been received from the SGX-ST for the listing and quotation of the Notes on the SGX-ST. For so long as the Notes are listed on the SGX-ST and the rules of the

	SGX-ST so require, the Notes, if traded on the SGX-ST, 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 SGX-ST, will be traded in a minimum board lot size of US$200,000.
Use of Proceeds	The Company expects to use the net proceeds from the sale of the Notes, estimated to be US$493,895,000 (after deduction of underwriting commissions but not estimated offering expenses), principally for general corporate purposes, including repayment of outstanding borrowings and capital expenditures.
Ratings	The Notes are expected to be rated "Baa2" by Moody's and "BBB-" by S&P. Such ratings of the Notes do not constitute a recommendation to buy, sell or hold the Notes and may be subject to revision or withdrawal at any time by the rating organizations. Such ratings should be evaluated independently of any other rating of the Notes, of other securities of the Company or of the Company.
Form and Denomination	The Notes offered hereby will be issued in registered form, without detachable coupons, in the minimum denomination of US$200,000 and integral multiples of US$1,000 in excess thereof. The Notes may be held and transferred, and will be offered and sold, in the principal amount of US$200,000 and integral multiples of US$1,000 in excess thereof. The Notes will initially be represented by a Global Note in registered form deposited on the closing date with, and registered in the name of a nominee of, a common depositary (the "Common Depositary") for Euroclear Bank SA/NV as operator of the Euroclear System ("Euroclear") and Clearstream Banking S.A. ("Clearstream"). Beneficial interests in the Global Note will be shown on, and transfers thereof will be effected only through, the records maintained by Euroclear and Clearstream and their respective account holders. Except as described herein, definitive certificates representing the Notes will not be issued in exchange for beneficial interests in the Global Note. See "The Global Note."

Delivery of the Notes	Delivery of the Notes, against payment in same-day funds, is expected on or about September 17, 2019.
Risk Factors	See “Risk Factors” for a discussion of certain factors that investors should consider in connection with an investment in the Notes.
Fiscal Agent, Principal Paying Agent and Registrar	The Bank of New York Mellon, London Branch will act as the fiscal agent (the “Fiscal Agent”), principal paying agent, transfer agent and registrar under the Fiscal Agency Agreement for the Notes.
Governing Law	The Notes and the Fiscal Agency Agreement are governed by, and will be construed in accordance with, the laws of the State of New York.
Security Codes	ISIN: XS2045892085 Common Code: 204589208

SUMMARY FINANCIAL DATA

The following tables present summary financial and other information of the Company. The summary financial information as of December 31, 2017 and 2018 and for the years ended December 31, 2016, 2017 and 2018 are derived from the audited consolidated financial statements of the Company included elsewhere in this Offering Circular, which have been prepared in accordance with K-IFRS. The summary financial information presented as of June 30, 2019 and for the six months ended June 30, 2018 and 2019 are derived from the unaudited condensed consolidated interim financial statements of the Company included elsewhere in this Offering Circular, which have been prepared in accordance with K-IFRS No. 1034 "Interim Financial Reporting."

The Company's results of operations for the six months ended June 30, 2019 may not be indicative of its result of operations for any future interim period or for the full year 2019.

Consolidated Statements of Comprehensive Income Data

	For the Year Ended December 31,			For the Six Months Ended June 30,	
	2016	2017	2018	2018	2019
			(In billions of Won)		
Sales	₩ 17,198	₩ 30,109	₩ 40,445	₩ 19,090	₩ 13,225
Cost of goods sold	10,787	12,702	15,181	7,145	8.528
Gross Profit	6,411	17,408	25,264	11,945	4,697
Selling and administrative expenses	3,134	3,686	4,420	2,003	2,693
Operating profit	3,277	13,721	20,844	9,941	2,004
Finance income	815	996	1,692	1,003	888
Finance expenses	846	1,250	1,142	678	725
Share of profit of equity-accounted investees	23	12	13	8	10
Other income	52	78	113	17	49
Other expenses	104	119	178	98	72
Profit before tax	3,216	13,440	21,341	10,194	2,156
Income tax expense	256	2,797	5,801	2,744	516
Profit for the period	2,960	10,642	15,540	7,450	1,639

Consolidated Statements of Financial Position Data

	As of December 31,		As of June 30,
	2017	2018	2019
		(In billions of Won)	
Assets			
Current assets:			
Cash and cash equivalents	₩ 2,950	₩ 2,349	₩ 1,129
Short-term financial instruments	4,675	524	411
Short-term investment assets	930	5,496	1,570
Trade receivables, net	5,553	6,320	4,803
Other current assets	563	782	742
Inventories, net	2,640	4,423	5,589
Total current assets	17,310	19,894	14,243
Non-current assets:			
Investments in associates and joint ventures	360	562	703
Long-term investment assets	43	4,326	4,618
Loans and other receivables, net	42	69	101
Property, plant and equipment, net	24,063	34,953	38,445
Intangible assets, net	2,247	2,679	2,574
Right-of-use assets	—	—	1,100
Other non-current assets	753	633	624
Deferred tax assets	600	544	624
Total non-current assets	28,108	43,764	48,790
Total assets	₩ 45,418	₩ 63,658	₩ 63,032
Liabilities			
Current liabilities:			
Trade and other accounts payable	₩ 4,823	₩ 6,658	₩ 4,467
Borrowings	774	1,614	2,078
Current tax liabilities	2,386	4,556	570
Lease liabilities	—	—	210
Other current liabilities	133	204	187
Total current liabilities	8,116	13,032	7,513
Non-current liabilities:			
Other non-trade payables	3	15	18
Borrowings	3,397	3,668	6,669
Defined benefit liabilities, net	6	5	123
Deferred tax liabilities	6	7	6
Lease liabilities	—	—	911
Other non-current liabilities	69	79	82
Total non-current liabilities	3,481	3,774	7,809
Total liabilities	11,598	16,806	15,321
Equity			
Equity attributable to equity holders of the Company:			
Capital stock	3,658	3,658	3,658
Capital surplus	4,144	4,144	4,144
Other equity	(771)	(2,506)	(2,506)
Accumulated other comprehensive loss	(502)	(483)	(230)
Retained earnings	27,287	42,034	42,635
	33,815	46,846	47,700
Non-controlling interests	6	7	11
Total equity	33,821	46,852	47,711
Total liabilities and equity	₩ 45,418	₩ 63,658	₩ 63,032

Other Financial Data

	For the Year Ended December 31,			For the Six Months Ended June 30,	
	2016	2017	2018	2018	2019
	(In billions of Won)				
Capital expenditures[1]	₩ 5,956	₩ 9,128	₩ 16,036	₩ 8,459	₩ 8,497
Net cash provided by operating activities	5,549	14,691	22,227	8,168	1,403
Net cash provided by (used in) investing activities	(6,230)	(11,919)	(21,429)	(10,365)	(4,883)
Net cash provided by (used in) financing activities	117	(352)	(1,395)	410	2,242
Adjusted EBITDA[2]	7,673	18,634	27,153	12,903	6,047

(1) Capital expenditures represent cash outflows for acquisition of property, plant and equipment.

(2) "Adjusted EBITDA" for a given period is defined as operating profit for such period under K-IFRS, excluding depreciation and amortization. Adjusted EBITDA is not a standard measure under K-IFRS; however, Adjusted EBITDA is a widely used financial indicator of a company's ability to incur and service debt. Adjusted EBITDA should not be considered in isolation or construed as an alternative to cash flows, profit for the period or any other measure of performance or as an indicator of the Company's operating performance, liquidity, profitability or cash flows generated by operating, investing or financing activities. Adjusted EBITDA has been presented herein because the Company believes Adjusted EBITDA is a useful supplement to cash flows data as a measure of its performance and its ability to generate cash flows from operations to cover debt service and taxes. The Company's Adjusted EBITDA presented herein may not be comparable to similarly titled measures presented by other companies. Investors should not compare the Company's Adjusted EBITDA to the Adjusted EBITDA presented by other companies because not all companies use the same definition of Adjusted EBITDA.

A reconciliation of the Company's operating profit to Adjusted EBITDA is as follows:

	For the Year Ended December 31,			For the Six Months Ended June 30,	
	2016	2017	2018	2018	2019
	(In billions of Won)				
Operating profit	₩ 3,277	₩ 13,721	₩ 20,844	₩ 9,941	₩ 2,004
Depreciation and amortization[1]	4,396	4,912	6,309	2,962	4,043
Adjusted EBITDA	₩ 7,673	₩ 18,634	₩ 27,153	₩ 12,903	₩ 6,047

(1) Depreciation and amortization for the six months ended June 30, 2019 includes the depreciation amount in right-of-use assets.

RISK FACTORS

An investment in the Notes is subject to numerous risks, including those listed below. Investors should carefully consider the following risks as well as the other information contained in this Offering Circular before purchasing the Notes. These risks could materially affect the Company's ability to meet its obligations under the Notes. In such case, investors may lose all or part of their investment in, and the expected return on, the Notes.

Risks Relating to the Company

The memory semiconductor industry is subject to cyclical fluctuations, including recurring periods of oversupply, which may result in volatility in the Company's operating results.

The Company's DRAM products accounted for 80.0% of its total sales in 2018 and 76.8% in the first half of 2019, and the Company's NAND flash products accounted for 18.3% of its total sales in 2018 and 18.2% in the first half of 2019. Accordingly, the Company's business is affected by market conditions in the highly cyclical memory semiconductor industry. The industry's cyclicality results primarily from fluctuations in demand for the end products that use memory semiconductors, particularly from the information and technology industry and the consumer electronics industry, which are sensitive to general conditions in the global economy, as well as fluctuations in the manufacturing capacity available to produce memory semiconductors. Uncertainties in the global economy have increased in recent years, with global financial and capital markets experiencing substantial volatility. Such developments have been caused by, and continue to be exacerbated by, among other things, deterioration in economic and trade relations between major economies (particularly between the United States and China), the slowdown of economic growth in China and other major emerging market economies, adverse economic and political conditions in Europe and Latin America and continuing geopolitical and social instability in various parts of the Middle East, as well as uncertainty regarding the timing and method of the United Kingdom's exit from the European Union. Any future deterioration of global economic conditions may result in a decline in demand for the Company's memory semiconductors.

The long lead times for new facilities to become operational have in some cases resulted in significant increases in the industry's production capacity coinciding with weakening demand, resulting in global oversupply of products and declining prices. Demand growth expectations in the end markets that use memory semiconductors have typically been accompanied by increased capital investment by manufacturers. In addition, semiconductor manufacturers worldwide have migrated to finer line-width process technologies and larger wafer sizes, both of which have increased the number of chips produced per wafer. These capital investments and adoption of new technologies may result in increases in the supply of memory semiconductors that are not matched by commensurate growth in demand in the end markets for such products. From time to time, the memory semiconductor industry has experienced significant and sometimes prolonged periods of oversupply and weak prices.

As a result of such fluctuations in global demand as well as in the manufacturing capacity available to produce memory semiconductors, the Company's results of operations may be volatile from period to period. Following a period of strong global demand for memory semiconductors in 2017 and the first half of 2018, the prices of DRAM and NAND flash products have decreased starting in the second half of 2018, reflecting weakening demand and a general oversupply in the market, which in turn has negatively impacted the Company's results of operations in the first half of 2019. The Company's revenue increased from ₩17,198 billion in 2016 to ₩30,109 billion in 2017 and further increased to ₩40,445 billion in 2018, and its profit for the year increased from ₩2,960 billion in 2016 to ₩10,642 billion in 2017 and further increased to ₩15,540 billion in 2018. However, the Company's revenue decreased by 30.7% from ₩19,090 billion in the first half of 2018 to ₩13,225 billion in the first

half of 2019, and its profit for the period decreased by 78.0% from ₩7,450 billion in the first half of 2018 to ₩1,639 billion in the first half of 2019. Reflecting a general slowdown in inventory turnover, the Company's inventory also increased by 26.4% from ₩4,423 billion as of December 31, 2018 to ₩5,589 billion as of June 30, 2019. Based on the Company's assessment of market demand for the Company's products, the production outlook of the global memory semiconductor industry as well as global economic conditions in general, the Company currently plans to reduce its overall production of memory semiconductors in the second half of 2019.

While the market prices of DRAM and NAND flash products have shown signs of recovery in recent months, there can be no assurance that such recovery will continue. An actual or anticipated deterioration of market conditions may result in a decline in demand for the Company's products that could have a negative impact on the prices at which they can be sold. In such a case, the Company will likely face pressure to reduce prices and may need to further rationalize its production capacity and reduce fixed costs. The Company's ability to significantly reduce expenditures for production facilities and research and development during an industry downturn is limited because of the need to maintain its competitive position. If the Company is unable to reduce its expenses sufficiently to offset reductions in prices and sales volume, the Company's margins will deteriorate and its business, financial condition and results of operations may be materially and adversely affected.

The memory semiconductor industry is highly competitive and the Company's failure to successfully compete would adversely affect its business.

The Company operates in an intensely competitive market, which has been characterized by erosion of selling prices, frequent product enhancements from changes in technology and relatively short product life cycles. During the past decade, intensified competition in the memory semiconductor industry has also led to consolidation as well as the formation of strategic alliances, such as a joint venture between Toshiba Memory Corporation ("TMC") and Western Digital Corporation ("Western Digital") targeting the NAND flash memory market. The Company's major competitors in the DRAM market include Samsung Electronics Co., Ltd. ("Samsung Electronics") and Micron Technology, Inc. ("Micron Technology"). The Company's major competitors in the NAND flash memory market include Samsung Electronics, TMC, Micron Technology, Western Digital and Intel Corporation ("Intel").

The Company competes in its principal product lines based on the following factors:

- pricing;
- manufacturing costs, yields and product availability;
- product performance, quality and reliability;
- successful and timely development of new products and manufacturing processes;
- ability to deliver in large volumes on a timely basis and the ability to meet changes in the customers' demands;
- marketing and distribution capability;
- customer service, including technical support; and
- brand recognition and financial strength.

Entry into memory semiconductor manufacturing requires substantial capital expenditures and significant technological and manufacturing expertise. Although the Company believes that its existing investment, experience and technological expertise provide significant "time to market" and economies of scale advantages over any potential new entrant into the market, the Company may face increasing competition from emerging companies that may significantly expand the scale of their operations.

Some of the Company's existing and new competitors may have greater financial, marketing, technical or other resources than the Company. 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 withstand downturns in the memory semiconductor markets in which the Company competes. There is no assurance that the Company will be able to continue to compete successfully, and its failure to do so could have a material adverse effect on its business, financial condition and results of operations.

The Company's future long-term growth depends to a significant extent on its ability to increase production capacity.

The Company's future long-term growth will be dependent on its ability to continue to expand its production capacity and total output beyond current levels. As part of the Company's efforts to reduce unit manufacturing costs, improve manufacturing yields and enhance its profitability, the Company periodically phases out the operations of its older fabs as well as upgrading them to new fabs that implement more advanced processing technologies. In addition to regular maintenance and enhancement of existing fabs, the Company's current on-going capital expenditure projects include the construction of its M16 fab in Icheon, Korea starting in December 2018 with completion targeted for October 2020, as well as the construction of a semiconductor foundry plant in Wuxi, China starting in August 2018 with completion targeted for December 2019 through a joint venture with Wuxi Industrial Development Group, an investment firm under the Wuxi regional government in China. SK hynix system IC holds a 50.1% interest in the joint venture. As part of its efforts to ensure its long-term competitiveness, the Company has also announced initiatives to secure land in Yongin, Korea by 2022 in order to construct its next generation of fabs.

The Company's ability to expand and successfully operate additional production facilities and increase output is subject to significant risks and uncertainties, including:

- its ability to secure adequate purchase orders from customers to maintain optimal production utilization rates;
- its ability to raise sufficient funds to build and operate new production facilities, including securing adequate working capital for labor costs and the purchase of raw materials and other supplies;
- delays and cost overruns associated with the build-out of additional facilities due to factors, many of which may be beyond the Company's control, such as delays in government approvals, problems with equipment vendors or raw material suppliers and equipment malfunctions and breakdowns; and
- diversion of significant management attention and other resources.

The Company's cash outflows for acquisition of property, plant and equipment amounted to ₩5,956 billion in 2016, ₩9,128 billion in 2017, ₩16,036 billion in 2018 and ₩8,497 billion in the first half of 2019. In the second half of 2019, the Company plans to reduce its capital expenditures compared to the amount invested in the first half of 2019. The Company periodically adjusts its capital expenditure plans on an on-going basis subject to market demand for the Company's products, the production outlook of the global memory semiconductor industry as well as global economic conditions in general. The Company may delay or not implement some of its announced capital expenditure plans based on its assessment of such market conditions. If the Company is unable to expand its production capacity and ramp up its operations within its anticipated timeframe and budgeted costs, the Company may not be able to meet customer demand and pursue additional economies of scale and growth, which could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company's revenue and profitability may decline if it is unable to obtain adequate supplies of raw materials and equipment in a timely manner and at reasonable prices.

The Company requires timely and adequate supplies of raw materials and equipment in order to manufacture its products. The Company sources most of its raw materials, including wafers, from suppliers in Japan, the United States and Korea. The Company is not dependent on any one supplier for a substantial portion of its raw material requirements for assembly and testing, and the Company believes that it generally has access to alternative sources of supply for its principal raw materials. However, from time to time, the Company and other semiconductor manufacturers have experienced shortages and increase in lead times for delivery of raw materials, which in turn have resulted in interruptions in production and delivery of products in the past. To minimize the potential for significant interruptions of supplies of principal raw materials, the Company has entered into multi-year supply agreements with its key material suppliers and plans to enter into similar agreements with other major suppliers, as well as diversify the geographic location of key suppliers.

Like other memory semiconductor manufacturers, the Company also depends on a limited number of manufacturers in the Netherlands, the United States and Japan for its key equipment. The Company generally seeks to obtain testing equipment with similar functionality from various vendors. However, the Company's purchases of high-end equipment meeting the Company's standards are limited to several manufacturers. In periods of high market demand, the lead times from order to delivery of such equipment can be as long as six to twelve months. The Company seeks to manage this process through early reservation of appropriate delivery slots and constant communication with its equipment suppliers. However, unavailability of equipment, delays in delivery of key equipment or failure of equipment to meet the Company's specifications could delay implementation of the Company's expansion plans and impair its ability to timely deliver products to its customers.

It is possible that any of the Company's key supplier relationships could be interrupted or terminated due to events beyond the Company's control, including natural disasters and international supply disruptions caused by geopolitical issues. For example, on July 1, 2019, Japan's Ministry of Economy, Trade and Industry announced that it will update and apply more stringent procedures on the export and transfer of certain controlled items and related technologies to Korea. Beginning July 4, 2019, Japanese suppliers are required to apply for an export license for each individual supply contract for certain materials, including extra-deep ultraviolet photoresistors and hydrogen fluoride, which are chemicals used in manufacturing memory semiconductors. This export license application process may take up to 90 days and is expected to cause delays in exports of such raw materials to Korea. In addition, on August 2, 2019, the Japanese cabinet passed measures to remove Korea from Japan's "white list" of preferred trading nations, which may increase the items that are subject to such export license requirements commencing from August 28, 2019. In response, the Company is striving to diversify the geographical location of its supplier base, but there can be no assurance that the Company will be able to secure sufficient supplies of the relevant raw materials from alternative suppliers in a timely manner and at reasonable prices to satisfy its long-term needs. In the event that the trade restrictions imposed by the Japanese government become prolonged, the Company's failure to mitigate the impact of such restrictions could materially and adversely affect its operations.

If the Company is unable to obtain adequate amounts of key raw materials and equipment in a timely manner and at a reasonable cost, the production of its products could be disrupted, which would negatively impact the Company's business, financial condition and results of operations.

The complexity of memory semiconductor production makes the Company highly susceptible to potential manufacturing issues.

Manufacturing memory semiconductors is a highly complex and precise process, requiring production in a tightly controlled, clean environment. Even very small impurities in raw materials, flaws

in the wafer fabrication process, defects in the masks used to print circuits on a wafer or other factors can cause a substantial percentage of wafers to be rejected or numerous chips on each wafer to be nonfunctional. The Company may experience problems in achieving an acceptable success rate in the manufacture of wafers, and the likelihood of facing such difficulties is higher in connection with the transition to new manufacturing methods. From time to time, the Company has experienced minor disruptions in its manufacturing process as a result of temporary power outages. The Company may also experience manufacturing problems in its assembly and test operations as a result of the introduction of new packaging materials. In addition, as technological advances in semiconductors become more rapid, manufacturing activities become more complex and prone to problems. Disruption of operations may also occur due to fire, flood or other natural disasters or calamities, human error, or acts of terrorism or war. Any interruption of wafer fabrication at any of the Company's facilities resulting in the failure to achieve acceptable manufacturing yields or inability to meet its customers' requirements would adversely affect the Company's business, financial condition and results of operations.

The memory semiconductor industry experiences continued declines in the average selling prices of products irrespective of cyclical fluctuations in the industry, and the Company's long-term profitability depends on its ability to respond to rapid technological changes in the manufacturing process in a timely and cost effective manner.

The average selling prices of memory semiconductors 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 and cost reductions in the memory semiconductor manufacturing process. The Company may be able to take advantage of temporary higher selling prices typically associated with launching new products, but such prices will likely decline over time, and in certain cases, very rapidly. If the average per-bit selling price for DRAMs and NAND flash memory products that the Company produces decreases faster than the pace at which the Company is able to reduce its per-bit manufacturing costs, the Company's gross margins would decrease. Accordingly, the Company's ability to respond to rapid technological changes in the manufacturing process and achieve higher manufacturing yields in a timely and cost effective manner is critical to its long-term profitability.

Due to the competitive nature of the memory semiconductor market, manufacturers are continually seeking the most efficient production methods to maintain a low cost base. For example, the Company is investing in enhancing its 3D NAND technology, which enables NAND flash memory cells to be stacked vertically in multiple layers, and is working towards transitioning its commercial production of NAND flash memory products from utilizing 3D 72 layers technology to 3D 96 layers technology. If the Company does not anticipate enhancements in manufacturing technology and fails to adopt new process technologies in a timely and cost effective manner, it may not be able to produce products that meet its customers' demands at competitive prices. Although new technologies typically yield more chips per wafer once ramp-up has been successfully completed, yields are typically low during the initial early stage of transition where new technologies are applied to existing manufacturing process. There is no guarantee that the Company will not experience material delays in connection with future migrations to new technologies. If the Company is unable to respond to rapid technological changes in the manufacturing process in a timely and cost effective manner, it may lose its market share, which in turn could have a material adverse effect on its business, financial condition and results of operations.

Requirements of the customers in the information and technology industry and the consumer electronics industry are continually and rapidly evolving, and the Company's success depends on its ability to anticipate and respond to these changes and trends.

Memory semiconductors are becoming increasingly diversified in terms of specifications, with customers demanding solutions that are optimized for their particular needs to manufacture specific electronic devices, including PCs, servers, graphic cards, mobile devices such as smartphones and tablets, and other consumer electronics products. The Company's continued success will depend on its ability to respond quickly to evolving customer requirements and industry standards in its target markets and to offer its customers a variety of products with reliable quality and advanced features.

If the Company's products do not keep pace with evolving industry standards, the Company could be required to invest significant resources to redesign its products to ensure compatibility with relevant standards. If the Company is slow to anticipate changing trends and respond to such changes in a timely manner, it could miss opportunities to capture potential customers, and it could lose its existing customers. In order for the Company to respond effectively to these and other market trends, it needs to dedicate significant resources to product design, research and development and marketing. There can be no assurance that the Company will have sufficient financial resources to fund all of the required research to develop technical innovations and meet changing industry standards. If the Company is unable to invest sufficient resources to satisfy the diversifying memory needs of its customers, or if it does so in an inefficient or untimely manner, it may lose its market share, which in turn could have a material adverse effect on its business, financial condition and results of operations.

The Company sells a substantial portion of its products to a select group of key customers in the United States and China, and any significant decrease in their order levels will negatively affect the Company's business.

A substantial portion of the Company's sales is attributable to a limited number of customers located in the United States and China. The Company's top two customers in 2018 accounted for in the aggregate 26.4% of the Company's total revenue. In the first half of 2019, the Company's top two customers accounted for in the aggregate 32.4% of the Company's total revenue. The Company cannot provide any assurance that its key customers will continue to place orders with the Company in the future at the same levels as in prior periods, or at all. The Company typically enters into mutually non-binding long-term supply arrangements of one to three years with its customers, which usually do not establish fixed pricing and volume commitments. Key customers may reduce quantities purchased, delay or cancel purchase orders or elect to terminate their business relationship with the Company at any time for a number of reasons, including industry consolidation through mergers and acquisitions. Because much of the Company's costs and operating expenses are relatively fixed, termination of business relationships with key customers or significant reductions in sales to any key customers would have a material adverse effect on the Company's business, financial condition and results of operations.

In recent years, the Company has also increasingly relied on sales to customers in China and the United States, and prolonged tensions in economic and trade relations between the two countries may have a material adverse effect on demand for the Company's products from key customers in such countries. Ongoing tensions between the United States and China and tariffs and other trade restrictions imposed by them on each other, including restrictions and penalties imposed by their respective governmental agencies such as the Bureau of Industry and Security of the U.S. Department of Commerce, may lead to a decrease in the volume of products manufactured by the Company's key customers located in such countries, which in turn could decrease demand for the Company's memory semiconductors used as components in their products. Revenue of sales subsidiaries located in China accounted for 39.0% of the Company's revenue in 2018 and 47.5% in the first half of 2019, while

revenue of sales subsidiaries located in the United States accounted for 35.3% of the Company's revenue in 2018 and 29.3% in the first half of 2019. The Company is unable to predict the duration of tensions in economic and trade relations between the two countries, and prolonged trade restrictions could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company's strategic alliances and investments may not be successful, which may adversely affect its competitive position and impair the Company's ability to achieve its business objectives.

The Company engages in strategic initiatives, including entering into joint ventures and joint product development and supply agreements, to further solidify its market position as a leading semiconductor company in the world. Cooperation in product design, manufacturing and sales and marketing between partner companies has increased in response to the growing diversity and complexity of memory semiconductors and applications, demand for technological enhancements and increasing costs associated with keeping pace with industry developments. The Company believes that its strategic initiatives will not only assist in maintaining and growing its presence in existing markets but also provide the Company with a cost-effective means of accessing new markets, products and technologies.

As part of the efforts to expand the Company's foundry business, SK hynix system IC entered into a joint venture with Wuxi Industrial Development Group, an investment firm under the Wuxi regional government in China. SK hynix system IC holds a 50.1% interest in the joint venture, which has been constructing a semiconductor foundry plant in Wuxi, China starting in August 2018 with completion targeted for December 2019. From time to time, the Company may also acquire equity stakes in other industry players to further strengthen its business relationships. For example, in June 2018, the Company participated as a member of a consortium led by Bain Capital (the "Bain Consortium") in its purchase of a controlling stake in TMC from Toshiba Corporation. TMC is the third largest supplier of NAND flash memory in terms of revenue, with a worldwide market share of 14.6% in 2018, according to Gartner. As a member of the Bain Consortium, the Company invested ₩2,637 billion for an indirect limited partnership interest in BCPE Pangea Intermediate Holdings Cayman, LP ("SPC 1"), which in turn holds an equity interest in TMC. In addition, the Company invested ₩1,279 billion to acquire convertible bonds issued by a second special purpose company, BCPE Pangea Cayman2 Limited ("SPC 2"), which are convertible into a 15.0% equity interest in TMC upon the occurrence of certain specified events. SPC 2 in turn holds an equity interest in TMC. As of June 30, 2019, the book value of the Company's investment in SPC 1 was ₩2,912 billion, and the book value of the Company's investment in convertible bonds issued by SPC 2 was ₩1,550 billion, which are accounted for as debt investments and classified as financial assets measured at fair value through profit or loss.

Strategic initiatives involve a number of risks, including potential disagreements with strategic partners, diversion of management attention and, in the case of joint ventures, cultural and operational challenges associated with operation of the joint venture. The Company's strategic, joint venture or consortium partners may have economic or business interests that are inconsistent with those of the Company, take actions contrary to agreed policies or objectives, undergo a change of control, experience financial and other difficulties or be unable or unwilling to fulfill their obligations. The Company's failure to address such risks or other problems encountered in connection with its past or future investments could cause the Company to fail to realize the anticipated benefits of such investments, cause the company to incur unanticipated liabilities, or could otherwise harm the Company's business relationships and reputation. In addition, the Company's investments may become subject to unanticipated impairment losses (or losses for financial assets measured at fair value through profit or loss) if the value of the invested assets declines. Any such developments could

have a material adverse effect on the Company's business, financial condition and results of operations.

The Company may not be able to successfully execute its diversification strategy.

As part of its overall strategy, the Company has been striving to diversify its business to areas other than memory semiconductors in recent years, particularly through investing in the expansion of its foundry business and production of CMOS image sensors that are used to perform the role of electronic film in digital photographing devices. The success of the Company's diversification strategy will depend, in part, on its ability to realize on the growth opportunities and anticipated synergies among its diversified businesses, which in turn will be subject to numerous factors, including the recruitment of qualified personnel, establishment of new business relationships as well as expansion of existing relationships with various customers and suppliers, procurement of necessary technology and know-how and access to investment capital at a reasonable cost. The Company's failure to successfully execute the its diversification strategy may adversely affect its business, financial condition and results of operations.

The Company may be unable to adequately protect its intellectual property rights or successfully defend against third party infringement claims, which could impair the Company's operations and competitiveness and harm its business and future prospects.

Protection of the Company's intellectual property rights is essential to keep others from copying the innovations that are central to the Company's current and future products. As of June 30, 2019, the Company and its significant subsidiaries (SK hynix memory solutions America Inc. and SK hynix system IC) owned 2,467 patents and 76 trademarks in Korea and 10,761 patents and 166 trademarks outside Korea. As of the same date, the Company and its significant subsidiaries had 9,536 patent and trademark applications pending in Korea and abroad. The Company's ability to compete successfully also depends on its ability to operate without infringing the proprietary rights of others. The memory semiconductor industry is characterized by frequent disputes and litigation regarding patent and other intellectual property rights. As is typical in the industry, the Company has from time to time received communications from third parties asserting their patents against its products and alleging the Company's infringement of their intellectual property rights. The Company expects to receive similar communications in the future. For a discussion of the Company's patent infringement claims and litigation matters, see "Business — Litigation and Regulatory Proceedings."

In the event any third party is adjudicated to have a valid intellectual property claim against the Company, the Company may be required to:

- refrain from selling the affected products in certain markets;
- make royalty payments or pay significant monetary damages, which may exceed the Company's reserves for such matters;
- seek to develop non-infringing technologies, which may be costly or time-consuming or may not be feasible; and
- seek to acquire licenses to the infringed technology, which may not be available on commercially reasonable terms, if at all.

Any of the foregoing, as well as the Company's inability to adequately protect its intellectual property rights, could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company relies on technology provided by third parties, and its business may suffer if it is unable to renew its licensing arrangements with them.

The Company has entered into technology license and cross-license agreements with third parties that give those parties the right to use patents and other technologies developed by the Company, as well as provide the Company with the right to use patents and other technologies developed by them. The Company anticipates that it will continue to enter into various licensing and cross-licensing arrangements in the future, which may increase its payments of licensing fees and royalties. If the Company is unable to enter into or renew technology licensing arrangements on acceptable terms, it may lose the legal right to use certain of the technologies it employs in manufacturing its products, which may prevent the Company from manufacturing and selling key products. In addition, the Company could be disadvantaged if its competitors obtain licenses for important technologies on more favorable terms than the Company. In the future, the Company may also need to obtain additional licenses for new or existing technologies. The Company's failure to secure or renew license agreements on acceptable terms may materially and adversely affect its business, financial condition and results of operations.

Products that do not meet customer specifications, contain or are perceived to contain defects or are otherwise incompatible with their intended uses could impose significant costs on the Company.

The design and production processes for the Company's products, including DRAMs, are highly complex. The Company may produce products that do not meet customer specifications, contain or are perceived to contain defects or are otherwise incompatible with their intended uses. Under the Company's general terms and conditions of sale and in accordance with industry practice, the Company provides a one-year warranty that is usually limited to repair or replacement of defective items or return of, or a credit with respect to, amounts paid for such items. From time to time, the Company may provide more extensive warranty coverage to certain customers. The Company may incur substantial costs in remedying defects in its products, which could include material inventory write-downs. Moreover, if actual or perceived problems with nonconforming, defective or incompatible products occur after the Company has shipped its products, the Company may not only have liability for providing replacements or otherwise compensating customers but also suffer damage to its relationship with important customers or to its reputation, which could have a material adverse effect on the Company's business, financial condition and results of operations.

Sanctions against the Company and other memory semiconductor producers for anti-competitive practices may have a direct or indirect material adverse impact on the Company's operations.

From time to time, the Company may become subject to investigations by government authorities as well as legal proceedings related to alleged involvement in anti-competitive practices. In the past, the Company and other DRAM manufacturers have been investigated by the Antitrust Division of the U.S. Department of Justice, and a number of class action lawsuits have been filed against the Company and other DRAM manufacturers in various federal district courts and state courts alleging violation of U.S. antitrust laws, unfair competition laws and other related laws. Generally, such class action cases are filed on behalf of classes of individuals and entities which purchased DRAMs directly or indirectly from the various DRAM suppliers. The "indirect purchaser" plaintiffs include purchasers of consumer products, such as computers, in which DRAMs are a component, and other purchasers that did not purchase DRAMs directly from a DRAM manufacturer.

Although the Company has resolved a number of the class action lawsuits and other legal proceedings related to its alleged involvement in anti-competitive practices, cases that are currently

pending include a class action lawsuit filed against the Company, SK hynix America Inc. and other DRAM manufacturers in the U.S. District Court for the Northern District of California in April 2018, asserting claims based on alleged price-fixing of DRAMs from June 1, 2016 to February 1, 2018. Similar lawsuits were subsequently filed in another federal court in the U.S., as well as in Canadian courts in British Columbia, Quebec and Ontario. In addition, in May 2018, the State Administration for Market Regulation of China initiated an investigation into alleged violations of antitrust laws relating to the Company's sales of DRAMs in China.

The Company believes that it has meritorious defenses to such claims, and the Company intends to vigorously defend against such claims. However, the Company is unable to predict the outcome of such investigations and legal proceedings. An adverse final resolution of any of the matters described above or any sanctions imposed against the Company for anti-competitive practices could result in liability to the Company, damage to its reputation, loss of experienced personnel or other consequences, any of which may have a material adverse effect on the Company's business, financial condition and results of operations.

Impositions of anti-dumping duties, safeguard duties, countervailing duties, quotas or tariffs may have an adverse impact on the Company's export sales.

The Company sells substantially all of its products outside Korea, and it currently is not subject to anti-dumping duties, safeguard duties, countervailing duties, quotas or tariffs in any market. However, as a producer with global sales and operations, the Company may become involved from time to time in trade remedy proceedings in one or more of its markets worldwide. The Company proactively plans for and responds to such proceedings to minimize any adverse effects and associated risks. The Company continues to carefully monitor developments with respect to trade remedy policies in all major markets in which the Company sells its products and, where necessary, vigorously defends its rights through litigation before tribunals such as the U.S. Court of International Trade. However, there can be no assurance that anti-dumping duties, safeguard duties, countervailing duties, quotas or tariffs will not be imposed on the Company's sales of products abroad in the future, and the imposition of any such measures against the Company may have a material adverse impact on its business and performance.

The Company may be unable to operate its business successfully if it is unable to retain and recruit qualified personnel.

The Company's success depends to a significant extent on the continued services of its senior management and research and development, engineering and other specialized personnel, and on its ability to continue to attract, retain and motivate such key employees. Generally, the Company's employees are not bound by employment or non-competition agreements and competition within the memory semiconductor industry for highly qualified employees is intense. There can be no assurance that the Company will not experience difficulty in recruiting and retaining qualified employees. The Company's business could suffer if it loses the services of any of its key personnel and cannot adequately replace them in a timely manner.

The Company is subject to strict environmental regulations, and it may become subject to penalties or restrictions that could cause its operations to be interrupted or result in significant compliance expenses.

The Company has manufacturing facilities in Korea and China. The Company's operations involve use of chemicals and generate chemical waste, waste water and other industrial waste at various stages in the manufacturing process, and the Company is subject to a variety of laws and regulations of local or national governments relating to the use, storage, discharge and disposal of

such chemicals by-products and waste substances. The Company is also subject to restrictions on using certain raw materials in its manufacturing process in fabs located in certain locations. The Company has installed various types of anti-pollution equipment, consistent with industry standards, for the treatment of chemical waste and equipment for the recycling of treated water and other industrial waste at its various facilities. However, the Company cannot provide assurance that environmental claims will not be brought against it or that local or national governments will not take steps toward adopting more stringent environmental standards. Any failure on the Company's part to comply with any present or future environmental regulations could result in the assessment of damages or clean-up costs or the imposition of fines or other penalties against it, a suspension of production, cessation of operations or relocation of manufacturing facilities to different locations. In addition, new environmental regulations could require the Company to acquire costly equipment or to incur other significant compliance expenses that may materially and negatively affect its business, financial condition and results of operations.

The Company may engage in future acquisitions, and it may be unable to successfully integrate these companies into its operations.

From time to time, the Company may acquire or invest in companies or businesses that may complement its business. The success of the Company's acquisitions and investments depends on a number of factors, including:

- the Company's ability to identify suitable opportunities for investment or acquisition;
- the Company's ability to reach an acquisition or investment agreement on terms that are satisfactory to it;
- the extent to which the Company is able to exercise control over the acquired company; and
- the Company's ability to successfully integrate the acquired company or business.

If the Company is unsuccessful in its acquisitions and investments, it may not be able to implement fully its business strategy to maintain or grow its business.

Fluctuations in exchange rates may result in foreign exchange losses.

There has been considerable volatility in exchange rates in recent years, including exchange rates between the Won and the U.S. dollar. To the extent that the Company incurs costs in one currency and makes sales in another, its profit margins may be affected by changes in the exchange rates between the two currencies. In particular, the Company's investments in manufacturing facilities in China are likely to continue to increase the proportion of its expenses that are incurred in RMB, while the Company's sales in China are denominated in U.S. dollars. Accordingly, an unhedged increase in the value of the RMB would increase the Company's construction and manufacturing costs and adversely impact its profitability. Changes in exchange rates can also affect the Won value of sales proceeds and operating and non-operating costs that are denominated in foreign currencies. The Company is unable to increase the prices of its products to adjust fully for the negative effects of exchange rate movements because prices in the memory semiconductor industry are dictated by worldwide supply and demand. In addition, exchange rate fluctuations can affect the Won value of the Company's equity investments and monetary assets and liabilities denominated in foreign currencies. See "Exchange Rate Information."

Appreciation of the Won may materially and adversely affect the Company's results of operations because, among other things, it reduces the Won value of the Company's export sales,

which are primarily denominated in U.S. dollars, as well as causing the Company's export products to be less competitive by raising their prices in U.S. dollar terms. On the other hand, the depreciation of the Won would create foreign exchange translation losses and increase the amount, in Won terms, of interest and principal of the Company's foreign currency-denominated debt, as well as increase in Won terms the cost of raw materials and equipment that the Company purchases from overseas sources. Under the Company's current operating and capital structure, appreciation of the Won generally has a net negative impact on the Company's operating income. Although the Company's general policy is to hedge against such currency risks, the Company cannot provide any assurance that it will be able to effectively manage such risks. Volatility in currency exchange rates may lead to losses, which could have a material adverse effect on the Company's financial condition and results of operations.

Related party transactions that the Company engages in are subject to scrutiny by the Korea Fair Trade Commission and the Korean tax authorities.

The Company's business relationships and transactions with its subsidiaries and affiliates are subject to ongoing scrutiny by the Korea Fair Trade Commission as to, among other things, whether such relationships and transactions constitute undue financial support among companies of the same business group. The Company engages in various transactions with its subsidiaries and affiliates on an arm's-length basis. See "Certain Relationships and Related Party Transactions." The Company is also subject to fair trade regulations limiting cross-guarantees of debt and cross-shareholdings among member companies of the SK Group. In addition, the Company's material business transactions with its subsidiaries, affiliates and member companies of the SK Group are subject to approval by its 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 the Company has engaged in transactions that violate applicable fair trade laws and regulations may result in fines or other punitive measures and may have a material adverse effect on the Company's reputation and its business.

In addition, under Korean tax law, there is an inherent risk that the Company's transactions with its subsidiaries, affiliates or any other person or company that is related to the Company 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 the Korean tax authorities determine that any of the Company's transactions with related parties was not on an arm's-length basis, the Company would not be permitted to deduct the amount equivalent to such undue financial support as expenses, which may have adverse tax consequences for the Company.

Risks Relating to Korea

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

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

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

- declines in consumer confidence and a slowdown in consumer spending;

- adverse conditions or uncertainty in the economies of countries and regions that are important export markets for Korea, such as China, the United States, Europe and Japan, or in emerging market economies in Asia or elsewhere;
- adverse changes or volatility in foreign currency reserve levels, commodity prices (including oil prices), exchange rates;
- deterioration in economic or diplomatic relations between Korea and its trading partners or allies, including deterioration resulting from territorial or trade disputes or disagreements in foreign policy (such as the removal of Korea from Japan's "white list" of preferred trading nations in August 2019 and the controversy between Korea and China regarding the deployment of a Terminal High Altitude Area Defense system in Korea by the United States in March 2017 and the ensuing economic and other retaliatory measures by China against Korea during the remainder of 2017);
- increased sovereign default risk in select countries and the resulting adverse effects on the global financial markets;
- investigations of large Korean business groups and their senior management for possible misconduct;
- a continuing rise in the level of household debt and increasing delinquencies and credit defaults by retail and small- and medium-sized enterprise borrowers in Korea;
- the economic impact of any pending or future free trade agreements or of any changes to existing free trade agreements;
- social and labor unrest;
- decreases in the market prices of Korean real estate;
- a 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 that, together, would lead to an increased government budget deficit;
- financial problems or lack of progress in the restructuring of Korean business groups, other large troubled companies, their suppliers or the financial sector;
- loss of investor confidence arising from corporate accounting irregularities and corporate governance issues concerning certain Korean companies;
- increases in social expenditures to support an aging population in Korea or decreases in economic productivity due to the declining population size in Korea;
- geopolitical uncertainty and risk of further attacks by terrorist groups around the world;
- the occurrence of severe health epidemics in Korea or other parts of the world, such as the Middle East Respiratory Syndrome outbreak in Korea in 2015;
- 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 and North Africa and any material disruption in the global supply of oil or sudden increase in the price of oil;
- natural or man-made disasters that have a significant adverse economic or other impact on Korea or its major trading partners;
- political or social tensions involving Russia and any resulting adverse effects on the global supply of oil or the global financial markets; and
- an increase in the level of tensions or an outbreak of hostilities between North Korea and Korea or the United States.

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

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

- North Korea renounced its obligations under the Nuclear Non-Proliferation Treaty in January 2003 and conducted six rounds of nuclear tests since October 2006, including claimed detonations of hydrogen bombs, which are more powerful than plutonium bombs, and warheads that can be mounted on ballistic missiles. Over the years, North Korea has also conducted a series of ballistic missile tests, including missiles launched from submarines and intercontinental ballistic missiles that it claims can reach the United States mainland. In response, the Government has repeatedly condemned the provocations and flagrant violations of relevant United Nations Security Council resolutions. In February 2016, the Government also closed the inter-Korea Gaesong Industrial Complex in response to North Korea's fourth nuclear test in January 2016. Internationally, the United Nations Security Council has passed a series of resolutions condemning North Korea's actions and significantly expanding the scope of sanctions applicable to North Korea, most recently in December 2017 in response to North Korea's intercontinental ballistic missile test in November 2017. Over the years, the United States and the European Union have also expanded their sanctions applicable to North Korea.
- In August 2015, two Korean soldiers were injured in a landmine explosion near the Korean demilitarized zone. Claiming the landmines were set by North Koreans, the Korean army re-initiated its propaganda program toward North Korea utilizing loudspeakers near the demilitarized zone. In retaliation, the North Korean army fired artillery rounds on the loudspeakers, resulting in the highest level of military readiness for both Koreas.
- In March 2010, a Korean naval vessel was destroyed by an underwater explosion, killing many of the crewmen on board. The Government formally accused North Korea of causing the sinking, while North Korea denied responsibility. Moreover, in November 2010, North Korea fired more than one hundred artillery shells that hit Korea's Yeonpyeong Island near the Northern Limit Line, which acts as the de facto maritime boundary between Korea and North Korea on the west coast of the Korean peninsula, causing casualties and significant property damage. The Government condemned North Korea for the attack and vowed stern retaliation should there be further provocation.

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

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

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

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

Under the Foreign Exchange Transaction Act of Korea and the Presidential Decree and regulations under that Act and Decree (collectively referred to as the "Foreign Exchange Transaction Laws"), if the Government deems that certain emergency circumstances, including sudden fluctuations in interest rates or exchange rates, extreme difficulty in 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 other types of capital transactions. Moreover, if the Government deems it necessary on account of war, armed conflict, natural disaster or grave and sudden changes in domestic or foreign economic circumstances or similar events or circumstances, the Minister of Economy and Finance may temporarily suspend performance under any or all foreign exchange transactions, in whole or in part, to which the Foreign Exchange Transaction Laws apply (including suspension of payment and receipt of foreign exchange) or impose an obligation to deposit or sell any means of payment to the Bank of Korea or certain other governmental agencies or financial institutions.

In addition, the Company's audited and unaudited condensed consolidated financial statements included in this Offering Circular are presented in accordance with K-IFRS and its future financial statements will be prepared in accordance with K-IFRS, which differ in certain respects from accounting principles applicable to companies in certain other countries. In making an investment decision, investors must rely upon their own examination of the Company, the terms of the offering and the financial and other information contained in this Offering Circular.

Risks Relating to the Notes

The Notes are unsecured obligations.

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

- the Company enters into bankruptcy, liquidation, reorganization or other winding-up proceedings;
- there is a default in payment under the Company's future secured indebtedness or other unsecured indebtedness; or
- there is an acceleration of any of the Company's indebtedness.

If any of these events occurs, the Company's assets may not be sufficient to pay amounts due on the Notes.

The Notes have limited liquidity.

The Notes constitute a new issue of securities for which there is no existing market. Approval in-principle has been received from the SGX-ST for the listing and quotation of the Notes on the SGX-ST. The offer and sale of the Notes is not conditioned on obtaining a listing of the Notes on the SGX-ST or any other securities exchange. Although the Initial Purchasers have advised the Company that they currently intend to make a market in the Notes, they are not obligated to do so, and any market-making activity with respect to the Notes, if commenced, may be discontinued at any time without notice in their sole discretion.

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

- prevailing interest rates;
- the financial condition, results of operations and future prospects of the Company;
- the rate of exchange between the Won and the U.S. dollar;
- political and economic developments in and affecting Korea and other regions;
- the market conditions for similar securities; and
- the financial condition and operating performance of the global memory semiconductor sector.

Credit ratings are periodically assigned to the Company and the Notes.

The Company and its debt securities, including the Notes, are subject to periodic review by independent credit rating agencies. Accordingly, increases in the level of the Company's outstanding indebtedness, a deterioration in its operating performance or other events could cause the rating agencies to downgrade the Company's credit ratings generally and the ratings on the Notes, which could adversely impact the trading prices for, or the liquidity of, the Notes. Any such downgrade could also adversely affect the Company's cost of borrowing, limit its access to the capital markets or result in more restrictive covenants in future debt agreements.

The Notes are expected to be rated Baa2 by Moody's and BBB- by S&P. The credit ratings assigned to the Notes are limited in scope, and may not reflect the potential impact of all risks that may affect the value of the Notes. Each agency's rating should be evaluated independently of any other agency's rating. A credit 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 agency. There can be no assurance that these ratings will remain in effect for a given period or that these ratings will not be revised by the rating agencies in the future.

Risks Relating to Forward-Looking Statements

This Offering Circular contains forward-looking statements. The Company cautions you not to rely on the forward-looking statements, which speak only as of the date of this Offering Circular.

In addition to the risks related to the Company's 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, including the statements relating to the Company's capital expenditure plans and its use of proceeds from the offering. These factors include, but are not limited to, the following:

- general economic, business and political conditions;
- fluctuations in prices of raw materials;
- adverse trends in regulatory, legislative and judicial developments;
- changes in interest rates and currency exchange rates;

- trends in the global semiconductor industry;
- factors affecting future profitability;
- seasonality;
- the Company's leverage and its ability to meet its 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 materialize, actual results may vary materially from those estimated, anticipated or projected, as well as from historical results. Specifically but without limitation, revenues could decrease, costs (including capital costs) could increase, investments could be delayed and anticipated improvements in performance might not be fully realized.

The Company cautions you not to rely on the forward-looking statements, which speak only as of the date of this Offering Circular. Except as required by law, the Company is not under any obligation, and expressly disclaims 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 the Company or any person acting on the Company's behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

USE OF PROCEEDS

The Company expects to use the net proceeds from the sale of the Notes, estimated to be US$493,895,000 (after deduction of underwriting commissions but not estimated offering expenses), principally for general corporate purposes, including repayment of outstanding borrowings and capital expenditures.

EXCHANGE RATE INFORMATION

The table below sets forth, for the periods and dates indicated, information concerning the Market Average Exchange Rate, announced by Seoul Money Brokerage Services, Ltd., between Won and U.S. dollars and rounded to the nearest tenth of one Won. 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.

Period	At End of Period	Average Rate[1]	High	Low
		(Won per US$1.00)		
2014	₩ 1,099.2	₩ 1,053.2	₩ 1,118.3	₩ 1,008.9
2015	1,172.0	1,131.5	1,203.1	1,068.1
2016	1,208.5	1,160.5	1,240.9	1,093.2
2017	1,071.4	1,130.8	1,208.5	1,071.4
2018	1,118.1	1,100.3	1,142.5	1,057.6
2019 (through August 29)	1,213.5	1,157.8	1,218.9	1,111.6
January	1,117.2	1,122.0	1,130.2	1,116.9
February	1,117.8	1,122.5	1,127.7	1,111.6
March	1,137.8	1,130.7	1,137.8	1,119.9
April	1,158.2	1,141.0	1,159.7	1,132.7
May	1,190.0	1,183.3	1,194.6	1,163.8
June	1,156.8	1,175.6	1,191.2	1,154.7
July	1,182.0	1,175.3	1,184.2	1,155.4
August (through August 29)	1,213.5	1,208.7	1,218.9	1,181.9

Source: Seoul Money Brokerage Services, Ltd.

(1) The average rate for each period is calculated as the average of the Market Average Exchange Rates on each business day during the relevant period (or portion thereof).

CAPITALIZATION

The following table sets forth the Company's capitalization (1) as derived from the unaudited condensed consolidated interim financial statements of the Company as of June 30, 2019 included in this Offering Circular and (2) as adjusted to give effect to the issuance of the Notes offered hereby, after deducting the underwriting commission but not estimated offering expenses payable by the Company and on the assumption that the proceeds from the issuance of the Notes will not be used for the immediate repayment of outstanding borrowings. For additional information, see "Summary Financial and Operating Data" and the unaudited condensed consolidated interim financial statements of the Company and the notes thereto included elsewhere in this Offering Circular.

	As of June 30, 2019	
	Actual	As Adjusted
	(in billions of Won)	
Long-term debt:		
Long-term borrowings, excluding current portion	₩ 4,186	₩ 4,186
Debentures, excluding current portion	2,483	2,483
Notes offered hereby[(1)]	—	578
Total long-term debt	6,669	7,247
Equity:		
Issued capital of ₩5,000 par value; Authorized: 9,000,000,000 shares; Issued and outstanding: 728,002,365 shares	3,658	3,658
Capital surplus	4,144	4,144
Other equity	(2,506)	(2,506)
Accumulated other comprehensive loss	(230)	(230)
Retained earnings	42,635	42,635
Total equity	47,711	47,711
Total capitalization	₩ 54,380	₩ 54,958

(1) Translated into Won at ₩1,156.8 to US$1.00, the Market Average Exchange Rate in effect on June 30, 2019.

Except for the Company's incurrence of ₩464 billion of additional long-term borrowings (net of repayments) in July and August 2019, there has been no material change in the Company's total capitalization since June 30, 2019.

SELECTED FINANCIAL INFORMATION

The following tables present selected financial and other information of the Company. The selected financial information as of December 31, 2017 and 2018 and for the years ended December 31, 2016, 2017 and 2018 are derived from the audited consolidated financial statements of the Company included elsewhere in this Offering Circular, which have been prepared in accordance with K-IFRS. The selected financial information presented as of June 30, 2019 and for the six months ended June 30, 2018 and 2019 are derived from the unaudited condensed consolidated interim financial statements of the Company included elsewhere in this Offering Circular, which have been prepared in accordance with K-IFRS No. 1034 "Interim Financial Reporting."

The Company's results of operations for the six months ended June 30, 2019 may not be indicative of its result of operations for any future interim period or for the full year 2019.

Consolidated Statements of Comprehensive Income Data

	For the Year Ended December 31,			For the Six Months Ended June 30,	
	2016	2017	2018	2018	2019
			(In billions of Won)		
Sales	₩ 17,198	₩ 30,109	₩ 40,445	₩ 19,090	₩ 13,225
Cost of goods sold	10,787	12,702	15,181	7,145	8.528
Gross Profit	6,411	17,408	25,264	11,945	4,697
Selling and administrative expenses	3,134	3,686	4,420	2,003	2,693
Operating profit	3,277	13,721	20,844	9,941	2,004
Finance income	815	996	1,692	1,003	888
Finance expenses	846	1,250	1,142	678	725
Share of profit of equity-accounted investees	23	12	13	8	10
Other income	52	78	113	17	49
Other expenses	104	119	178	98	72
Profit before tax	3,216	13,440	21,341	10,194	2,156
Income tax expense	256	2,797	5,801	2,744	516
Profit for the period	2,960	10,642	15,540	7,450	1,639

Consolidated Statements of Financial Position Data

	As of December 31,		As of June 30,
	2017	2018	2019
		(In billions of Won)	
Assets			
Current assets:			
Cash and cash equivalents	₩ 2,950	₩ 2,349	₩ 1,129
Short-term financial instruments	4,675	524	411
Short-term investment assets	930	5,496	1,570
Trade receivables, net	5,553	6,320	4,803
Other current assets	563	782	742
Inventories, net	2,640	4,423	5,589
Total current assets	17,310	19,894	14,243
Non-current assets:			
Investments in associates and joint ventures	360	562	703
Long-term investment assets	43	4,326	4,618
Loans and other receivables, net	42	69	101
Property, plant and equipment, net	24,063	34,953	38,445
Intangible assets, net	2,247	2,679	2,574
Right-of-use assets	—	—	1,100
Other non-current assets	753	633	624
Deferred tax assets	600	544	624
Total non-current assets	28,108	43,764	48,790
Total assets	₩ 45,418	₩ 63,658	₩ 63,032
Liabilities			
Current liabilities:			
Trade and other accounts payable	₩ 4,823	₩ 6,658	₩ 4,467
Borrowings	774	1,614	2,078
Current tax liabilities	2,386	4,556	570
Lease liabilities	—	—	210
Other current liabilities	133	204	187
Total current liabilities	8,116	13,032	7,513
Non-current liabilities:			
Other non-trade payables	3	15	18
Borrowings	3,397	3,668	6,669
Defined benefit liabilities, net	6	5	123
Deferred tax liabilities	6	7	6
Lease liabilities	—	—	911
Other non-current liabilities	69	79	82
Total non-current liabilities	3,481	3,774	7,809
Total liabilities	11,598	16,806	15,321
Equity			
Equity attributable to equity holders of the Company:			
Capital stock	3,658	3,658	3,658
Capital surplus	4,144	4,144	4,144
Other equity	(771)	(2,506)	(2,506)
Accumulated other comprehensive loss	(502)	(483)	(230)
Retained earnings	27,287	42,034	42,635
	33,815	46,846	47,700
Non-controlling interests	6	7	11
Total equity	33,821	46,852	47,711
Total liabilities and equity	₩ 45,418	₩ 63,658	₩ 63,032

Other Financial Data

	For the Year Ended December 31,			For the Six Months Ended June 30,	
	2016	2017	2018	2018	2019
	(In billions of Won)				
Capital expenditures[1]	₩ 5,956	₩ 9,128	₩ 16,036	₩ 8,459	₩ 8,497
Net cash provided by operating activities	5,549	14,691	22,227	8,168	1,403
Net cash provided by (used in) investing activities	(6,230)	(11,919)	(21,429)	(10,365)	(4,883)
Net cash provided by (used in) financing activities	117	(352)	(1,395)	410	2,242
Adjusted EBITDA[2]	7,673	18,634	27,153	12,903	6,047

(1) Capital expenditures represent cash outflows for acquisition of property, plant and equipment.

(2) "Adjusted EBITDA" for a given period is defined as operating profit for such period under K-IFRS, excluding depreciation and amortization. Adjusted EBITDA is not a standard measure under K-IFRS; however, Adjusted EBITDA is a widely used financial indicator of a company's ability to incur and service debt. Adjusted EBITDA should not be considered in isolation or construed as an alternative to cash flows, profit for the period or any other measure of performance or as an indicator of the Company's operating performance, liquidity, profitability or cash flows generated by operating, investing or financing activities. Adjusted EBITDA has been presented herein because the Company believes Adjusted EBITDA is a useful supplement to cash flows data as a measure of its performance and its ability to generate cash flows from operations to cover debt service and taxes. The Company's Adjusted EBITDA presented herein may not be comparable to similarly titled measures presented by other companies. Investors should not compare the Company's Adjusted EBITDA to the Adjusted EBITDA presented by other companies because not all companies use the same definition of Adjusted EBITDA.

A reconciliation of the Company's operating profit to Adjusted EBITDA is as follows

	For the Year Ended December 31,			For the Six Months Ended June 30,	
	2016	2017	2018	2018	2019
	(In billions of Won)				
Operating profit	₩ 3,277	₩ 13,721	₩ 20,844	₩ 9,941	₩ 2,004
Depreciation and amortization[1]	4,396	4,912	6,309	2,962	4,043
Adjusted EBITDA	₩ 7,673	₩ 18,634	₩ 27,153	₩ 12,903	₩ 6,047

(1) Depreciation and amortization for the six months ended June 30, 2019 includes the depreciation amount in right-of-use assets.

BUSINESS

Overview

The Company is one of the world's largest memory semiconductor companies and engages in the design, manufacture and sale of advanced memory semiconductors. In the DRAM market, the Company is ranked number two globally based on revenue with a market share of 29.5% in 2018, according to Gartner. In addition, the Company is the fifth largest supplier of NAND flash memory in terms of revenue, with a worldwide market share of 11.0% in 2018, according to Gartner. The Company's memory products can be used in virtually all electronic devices, including PCs, servers, graphic cards, mobile devices such as smartphones and tablets, and other consumer electronics products. The Company has also expanded its product portfolio into non-memory semiconductors, including CMOS image sensors that are used to perform the role of electronic film in digital photographing devices such as smartphones, tablets, PC laptops and surveillance cameras, as well as engaging in the foundry business through SK hynix system IC, a wholly-owned subsidiary.

The Company sells a wide variety of DRAM and NAND flash memory products with various configuration options, architectures and performance characteristics tailored to meet application- and customer-specific needs. The Company believes that it is one of the world's leading companies in developing DRAMs with advanced specifications, particularly those relating to higher density, faster data-processing speed and lower energy consumption. The Company is continually developing higher-density modules, SSDs and other specialty DRAM and NAND flash memory products that are optimized for use in specific applications. The Company believes that offering specialty products provides opportunities to mitigate the negative effects of the cyclicality of the memory products market, and its specialty products typically command higher prices than standardized DRAMs used in PCs because of their superior performance and customized characteristics.

The Company owns and operates fabs in Icheon and Cheongju, Korea and Wuxi, China. The Company also owns and operates assembly and testing facilities for back-end processing of its products in Icheon and Cheongju, Korea and Chongqing, China. As part of the Company's efforts to reduce unit manufacturing costs, improve manufacturing yields and enhance its profitability, the Company periodically phases out the operations of its older fabs as well as upgrading them to new fabs that implement more advanced processing technologies. In addition to regular maintenance and enhancement of existing fabs, the Company's current on-going capital expenditure projects include the construction of its M16 fab in Icheon, Korea starting in December 2018 with completion targeted for October 2020. As part of its efforts to ensure its long-term competitiveness, the Company has also announced initiatives to secure land in Yongin, Korea by 2022 in order to construct its next generation of fabs.

In order to maintain its technological leadership, as well as to access new markets for its products, the Company engages in strategic initiatives, including entering into joint ventures and joint product development and supply agreements. From time to time, the Company may also acquire equity stakes in other industry players to further strengthen its business relationships. See "— Strategic Alliances and Investments."

The Company's revenue was ₩17,198 billion in 2016, ₩30,109 billion in 2017 and ₩40,445 billion in 2018, and ₩19,090 billion in the first half of 2018 and ₩13,225 billion in the first half of 2019. The Company recorded profit for the year of ₩2,960 billion in 2016, ₩10,642 billion in 2017 and ₩15,540 billion in 2018, and profit for the period of ₩7,450 billion in the first half of 2018 and ₩1,639 billion in the first half of 2019. The Company had total assets of ₩63,658 billion and total equity of ₩46,852 billion as of December 31, 2018 and total assets of ₩63,032 billion and total equity of ₩47,711 billion as of June 30, 2019.

History

In 1983, the Company's predecessor, Hyundai Electronics Industries Co., Ltd. ("Hyundai Electronics Industries"), entered the memory semiconductor industry with the construction of its first fab in Icheon, Korea, pursuant to a manufacturing alliance with Texas Instruments. In December 1996, Hyundai Electronics Industries became a public company through an initial public offering and listing of its common shares on the KRX KOSPI Market. In May 1999, Hyundai Electronics Industries acquired the memory semiconductor business of the LG Group, and such business was subsequently merged into Hyundai Electronics Industries.

In response to a substantial decline in global DRAM prices as a result of worldwide oversupply, Hyundai Electronics Industries underwent a corporate restructuring starting in 2001, including divestment of non-core businesses and a restructuring of its debt through debt cancellations, extensions of maturities and reductions of interest rates as well as a debt-to-equity swap with its creditors. In March 2001, Hyundai Electronics Industries changed its name to Hynix Semiconductor Inc. ("Hynix Semiconductor"), and the Korea Fair Trade Commission approved its disaffiliation from the former Hyundai Group in August 2001. In February 2012, the former creditors of Hynix Semiconductor sold their remaining interest in the Company to SK Telecom Co., Ltd. ("SK Telecom"). Hynix Semiconductor changed its name to SK hynix Inc. in March 2012. As of June 30, 2019, SK Telecom held a 20.1% interest in the Company.

Products and Applications

The Company sells a wide variety of DRAM and NAND flash memory products with various configuration options, architectures and performance characteristics tailored to meet application- and customer-specific needs. The Company has also expanded its product portfolio into non-memory semiconductors, including CMOS image sensors that are used to perform the role of electronic film in digital photographing devices such as smartphones, tablets, PC laptops and surveillance cameras, as well as engaging in the foundry business through SK hynix system IC, a wholly-owned subsidiary.

The following table sets forth the Company's revenue by principal product category and related percentage data for the periods indicated.

	Year Ended December 31,						Six Months Ended June 30,			
	2016		2017		2018		2018		2019	
	(in billions of Won, except percentages)									
DRAM	₩12,341	71.8%	₩22,887	76.0%	₩32,371	80.0%	₩15,202	79.6%	₩10,158	76.8%
NAND Flash	4,348	25.3	6,649	22.1	7,421	18.3	3,564	18.7	2,410	18.2
Other Products	510	3.0	573	1.9	653	1.6	325	1.7	657	5.0
Total	₩17,198	100.0%	₩30,109	100.0%	₩40,445	100.0%	₩19,090	100.0%	₩13,225	100.0%

DRAM

DRAM is a type of random access memory semiconductor and is the highest density and lowest cost per bit memory component available for high-speed digital data storage and retrieval. Sales of DRAMs accounted for 71.8% of the Company's total revenue in 2016, 76.0% in 2017, 80.0% in 2018 and 76.8% in the first half of 2019. The Company offers a wide range of standardized DRAMs as well as specialty DRAMs for applications with higher performance requirements that are sold at higher prices. The Company's specialty DRAMs are used primarily in servers as well as graphics, mobile and other consumer electronics applications.

PC Memory. The Company offers standardized DRAMs that are primarily used in the PC industry. The Company's representative PC memory products are offered in densities ranging from 4

gigabyte (“GB”) to 32 GB in a Double Data Rate 4 Synchronous DRAM (“DDR4”) configuration that offers higher data transfer speeds. In the past, the introduction of new or updated Windows operating systems has resulted in upgrading of PCs, which in turn has increased demand for standardized DRAMs. In recent years, the increase in popularity of chromebooks that are designed for the education market, PCs specifically designed for online games and multi-function ultrabook laptops that require higher density memory has contributed to an increase in demand for the Company’s PC memory products.

Server Memory. In 2017 and 2018, increases in demand from data centers that provide cloud computing services contributed to a significant increase in the Company’s sales of high-density specialty DRAM memory modules that are specifically designed for servers. Such increase has also been driven by the growing popularity of analytics applications based on artificial intelligence and machine learning technologies that require sophisticated big data cloud computing, as well as the build-out of 5G mobile infrastructure utilizing edge computing paradigms that bring computation and data storage closer to the location where they are needed to improve response time and save bandwidth. The Company’s representative server memory module products are offered in densities ranging from 8 GB to 128 GB in a DDR4 configuration.

Graphic Memory. In recent years the increasing popularity of high-resolution online games and 4K and 8K video content streaming as well as production of online media content and cinematic 3D motion graphics have contributed to a steady increase in demand for graphic memory products that are primarily used in graphics processing units (“GPU”) and other graphics cards. The Company’s representative graphic memory products are offered in densities ranging from 4 gigabit (“Gb”) to 8 Gb in a Graphics DDR 5 Synchronous DRAM (“GDDR5”) configuration. The Company also offers next-generation graphic memory products with densities ranging from 8 Gb to 16 Gb in Graphics DDR 6 Synchronous DRAM (“GDDR6”) and High Bandwidth Memory 2 (“HBM2”) configurations designed to meet greater data-processing speed requirements of graphics applications that incorporate virtual reality, deep leading and artificial intelligence technologies. The Company seeks to strengthen its relationships with leading GPU, PC and game console manufacturers to more effectively meet their needs for high bandwidth graphics memory solutions.

Mobile Memory. The Company’s mobile memory products are designed to have low-power and high bandwidth features that are optimized for use in mobile devices such as smartphones and tablets. Although growth in global sales volume of smartphones has decreased in recent years, the Company believes that increases in memory density per device will continue to contribute to growth in demand for mobile memory products. The Company’s representative mobile memory products are offered in densities ranging from 4 GB to 8 GB in a Low-Power Double Data Rate 3 (“LPDDR3”) configuration as well as in densities ranging from 4 GB to 12 GB in a Low-Power Double Data Rate 4 (“LPDDR4”) configuration that provides faster data-processing speed while consuming less power. The Company also offers a LPDDR4X configuration that provides additional power saving features. The demand for high-density mobile memory products is expected to increase in the future, driven by artificial intelligence and augmented reality applications and expansion of other content offered through 5G mobile services, as well as enhancements of functions in high-end smartphones such as the use of multiple cameras. The Company is also developing an additional lineup of package-on-package and multi-chip package solutions to more effectively address the requirements of next-generation mobile devices.

Consumer Memory. The Company offers specialty DRAMs for use in various consumer electronics devices such as digital televisions, set-top boxes for Internet protocol televisions (“IP-TV”), smart speakers, car navigation systems and other digital appliances that connect to the Internet. The Company designs its consumer memory products to meet the specific requirements of its customers and offers a full line-up of standardized to highly specialized products in various specifications,

including densities ranging from 2 Gb to 8 Gb in a DDR4 configuration, as well as low-power LPDDR4 and LPDDR4X configurations and specialty industrial temperature and automotive temperature models. The Company believes that the increasing popularity of high resolution video content and the launch of 5G mobile services will contribute to growth in demand for consumer memory products that are necessary for digital devices.

NAND Flash Memory

NAND flash memory is a non-volatile memory device, which retains memory content even when power is turned off. Sales of NAND flash memory products accounted for 25.3% of the Company's total revenue in 2016, 22.1% in 2017, 18.3% in 2018 and 18.2% in the first half of 2019. In the past, the Company sold NAND flash memory products for use in portable devices with storage needs, such as USB drives, digital still cameras and MP3 players. In more recent years, the increasing popularity of more advanced smartphones and tablets with multimedia functions as well as increases in consumption of high resolution content have contributed to growth in demand for NAND flash products. In addition, NAND flash memory-based SSDs, which provide faster and more reliable data access and consume less power compared to hard disk drives, have started to replace hard disk drives as the main storage device for laptops and servers. Enterprise use of SSDs is expected to increase further as cloud computing services offered by data centers and "Internet of Things" ("IoT") applications with higher storage requirements and real-time data-processing needs continue to evolve.

The Company offers a wide range of NAND flash memory products in various formats, including Universal Flash Storage ("UFS") formats in densities ranging from 64 GB to 512 GB, embedded Multi Media Card ("eMMC") formats in densities ranging from 4 GB to 128 GB and raw NAND in single-level cell ("SLC"), multi-level cell ("MLC") and triple-level cell ("TLC") formats. In order to more effectively respond to evolving market trends, the Company continues to invest in enhancing its 3D NAND technology, which enables NAND flash memory cells to be stacked vertically in multiple layers, and is working towards transitioning its commercial production of NAND flash memory products from utilizing 3D 72 layers technology to 3D 96 layers technology. In the SSD market, the Company's representative SSD products for enterprise customers are offered in densities ranging from 480 GB to 3,840 GB, and the Company's representative SSD products for manufacturers are offered in densities ranging from 128 GB to 1024 GB.

CMOS Image Sensors

CMOS image sensors are a type of imaging device that performs the role of electronic film in digital photographing devices such as smartphones, tablets, PC laptops and surveillance cameras. Cost and image quality are key to success in the image sensor market. CMOS image sensors offer a distinct form factor, cost, speed and operating power advantage over charge-coupled devices, and enhancements in image quality have led to applications in additional devices such as medical equipment, DSLR cameras, camcorders and automobiles. In recent years, the increasing sophistication of camera functions in smart phones, including use of triple and quadruple cameras in high-end models, has also contributed to growth in demand for CMOS image sensors.

The Company is currently focused on the smart phone market and the PC laptop market, which share similar specifications and requirements. The Company's representative CMOS image sensor products are offered in various specifications, including Video Graphic Array ("VGA") and High Definition ("HD") standards as well as in resolutions ranging from 1.3 megapixels to 13.0 megapixels utilizing advanced back-side illumination technology. The Company is currently engaged in research and development efforts to develop 0.8um pixel technology and further narrow the technological gap with global industry leaders in the CMOS image sensors market, as well as to continue to expand the Company's portfolio of higher-resolution products. The Company is also pursuing additional growth

opportunities and striving to diversify applications of its products in new markets such as surveillance cameras and automobiles. In July 2019, the Company announced plans to convert a DRAM production line in its M10 fab in Icheon, Korea to a CMOS image sensor line in response to an increase in demand for CMOS image sensors.

Customers, Sales and Marketing

The Company has a global customer base consisting of leading manufacturers and original equipment manufacturers ("OEMs") of consumer electronics products, communications equipment, PCs, servers and workstations. The Company's top two customers in 2018 accounted for in the aggregate 26.4% of the Company's total revenue. In the first half of 2019, the Company's top two customers accounted for in the aggregate 32.4% of the Company's total revenue. In addition to establishing a strong long-term customer base, the Company actively seeks to expand its customer base by targeting emerging markets.

The following table sets forth the Company's revenue by region based on the location of selling entities and related percentage data for the periods indicated.

	Year Ended December 31,						Six Months Ended June 30,			
	2016		2017		2018		2018		2019	
	(in billions of Won, except percentages)									
China	₩ 5,960	34.7%	₩10,075	33.5%	₩15,786	39.0%	₩ 7,372	38.6%	₩ 6,282	47.5%
United States	5,398	31.4	11,064	36.7	14,278	35.3	6,506	34.1	3,868	29.3
Asia [1]	2,165	12.6	3,575	11.9	4,610	11.4	2,227	11.7	1,181	8.9
Taiwan	1,733	10.1	2,627	8.7	2,950	7.3	1,584	8.3	677	5.1
Korea	1,099	6.4	1,207	4.0	840	2.1	526	2.8	617	4.7
Europe	843	4.9	1,562	5.2	1,981	4.9	875	4.6	599	4.5
Total	₩17,198	100.0%	₩30,109	100.0%	₩40,445	100.0%	₩19,090	100.0%	₩13,225	100.0%

(1) Other than China, Taiwan and Korea

Sales outside of Korea are primarily conducted through the Company's ten overseas sales subsidiaries located in the United States, Germany, the United Kingdom, Japan, Singapore, India, Taiwan and China. The sales subsidiaries typically sell directly to the end users of the Company's products. However, a small portion of the Company's sales, consisting mainly of standardized DRAMs, are made through sales representatives and semiconductor product distributors depending on the characteristics of the customer base and geographic location. The Company ships orders placed by sales representatives directly to the end customer. Distributors, on the other hand, typically carry a wide variety of different products, including the Company's products as well as those of its competitors, in inventory for onward sale to their customers. The Company's sales subsidiaries have significantly reduced their dependence on sales representatives, relying more on their internal sales and marketing teams to sell directly to the Company's end customers.

In line with the increase in segmentation within the DRAM market and the growth of applications that require tailored memory solutions, the Company has focused its sales and marketing activities on expanding its base of long-term customers who look to the Company as their preferred supplier of specialized memory products. The Company believes having a diversified portfolio makes it less susceptible to variations in demand in different market segments, especially in the standardized DRAM market. The Company's customers look for reliability, scale and timely delivery, and the Company believes that its close relationships with strategic customers who are leaders in their respective fields enable the Company to anticipate market trends and evolving customer product needs. The Company typically enters into mutually non-binding long-term supply arrangements of one to three years with its customers, which usually do not establish fixed pricing and volume

commitments. These arrangements generally have an automatically renewable term of one to three years. The Company's existing long-term arrangements do not restrict the Company from entering into similar arrangements with other customers.

The Company manages its accounts receivable and credit exposure to customers by establishing credit limits for each customer in accordance with the Company's internal credit guidelines. The Company maintains three general categories of customer accounts:

- Strategic accounts for global OEMs: the Company's chief financial officer conducts a comprehensive review of all strategic account customers at least once each year. The chief financial officer has discretion to adjust credit limits for all strategic account customers, including downgrades.
- Core accounts for leading OEMs: core accounts are monitored, and credit limits adjusted, by the respective core account managers at the Company's headquarters who report directly to the chief financial officer at least once each year.
- Local accounts for smaller-scale OEMs and distributors: local accounts are required to pay in cash and customers are typically unable to obtain credit in excess of the value of the collateral provided, such as factoring or letters of credit.

The Company considers each customer's current and potential contribution to its overall sales, industry leadership and product technology as well as other quantitative and qualitative criteria to determine individual credit limits. The Company also takes certain measures, such as factoring arrangements, to protect the Company from excessive exposure to credit risks. To date, the Company has not experienced any material problems relating to customer payments.

Product Warranty

Despite the Company's quality control efforts, because the design and manufacturing process for memory semiconductors is highly complex, the Company may ship products that do not fully comply with customer specifications, contain defects or are otherwise incompatible with their intended uses. Under the Company's general terms and conditions of sale and in accordance with industry practice, the Company provides a one-year warranty that is usually limited to repair or replacement of defective items or return of, or a credit with respect to, amounts paid for such items. From time to time, the Company may provide more extensive warranty coverage to certain customers.

Strategic Alliances and Investments

The Company engages in strategic initiatives, including entering into joint ventures and joint product development and supply agreements, to further solidify its market position as a leading semiconductor company in the world. Cooperation in product design, manufacturing and sales and marketing between partner companies has increased in response to the growing diversity and complexity of memory semiconductors and applications, demand for technological enhancements and increasing costs associated with keeping pace with industry developments. The Company believes that its strategic initiatives will not only assist in maintaining and growing its presence in existing markets but also provide the Company with a cost-effective means of accessing new markets, products and technologies.

As part of the efforts to expand the Company's foundry business, SK hynix system IC entered into a joint venture with Wuxi Industrial Development Group, an investment firm under the Wuxi regional government in China. SK hynix system IC holds a 50.1% interest in the joint venture, which has been constructing a semiconductor foundry plant in Wuxi, China starting in August 2018 with

completion targeted for December 2019. From time to time, the Company may also acquire equity stakes in other industry players to further strengthen its business relationships. For example, in June 2018, the Company participated as a member of the Bain Consortium in its purchase of a controlling stake in TMC from Toshiba Corporation. TMC is the third largest supplier of NAND flash memory in terms of revenue, with a worldwide market share of 14.6% in 2018, according to Gartner. As a member of the Bain Consortium, the Company invested ₩2,637 billion for an indirect limited partnership interest in SPC 1, which in turn holds an equity interest in TMC. In addition, the Company invested ₩1,279 billion to acquire convertible bonds issued by a second special purpose company, SPC 2, which are convertible into a 15.0% equity interest in TMC upon the occurrence of certain specified events. SPC 2 in turn holds an equity interest in TMC. As of June 30, 2019, the book value of the Company's investment in SPC 1 was ₩2,912 billion, and the book value of the Company's investment in convertible bonds issued by SPC 2 was ₩1,550 billion, which are accounted for as debt investments and classified as financial assets measured at fair value through profit or loss.

Competition

The Company operates in an intensely competitive market, which has been characterized by erosion of selling prices, frequent product enhancements from changes in technology and relatively short product life cycles. During the past decade, intensified competition in the memory semiconductor industry has also led to consolidation as well as the formation of strategic alliances, such as a joint venture between TMC and Western Digital targeting the NAND flash memory market. The Company's major competitors in the DRAM market include Samsung Electronics and Micron Technology. The Company's major competitors in the NAND flash memory market include Samsung Electronics, TMC, Micron Technology, Western Digital and Intel.

The Company competes in its principal product lines based on the following factors:

- pricing;
- manufacturing costs, yields and product availability;
- product performance, quality and reliability;
- successful and timely development of new products and manufacturing processes;
- ability to deliver in large volumes on a timely basis and the ability to meet changes in the customers' demands;
- marketing and distribution capability;
- customer service, including technical support; and
- brand recognition and financial strength.

Entry into memory semiconductor manufacturing requires substantial capital expenditures and significant technological and manufacturing expertise. Although the Company believes that its existing investment, experience and technological expertise provide significant "time to market" and economies of scale advantages over any potential new entrant into the market, the Company may face increasing competition from emerging companies that may significantly expand the scale of their operations.

Equipment and Suppliers

Like other memory semiconductor manufacturers, the Company depends on a limited number of manufacturers in the Netherlands, the United States and Japan for its key equipment. The principal pieces of equipment the Company uses to manufacture its semiconductors include steppers, scanners,

tracks, etchers, furnaces, wet stations, implanters, chemical vapor deposition, metrology inspection and chemical mechanical planarization equipment. The Company also seeks to maintain testers with the ability to test a variety of different memory semiconductors. In addition to specialized testing equipment, the Company maintains a variety of other types of equipment which are also used in the testing process, such as automated handlers and probers (with special handlers for wafer probing), reformers and PC workstations for use in software development.

The Company generally seeks to obtain testing equipment with similar functionality from various vendors. However, the Company's purchases of high-end equipment are limited to several manufacturers. In periods of high market demand, the lead times from order to delivery of such equipment can be as long as six to twelve months. The Company seeks to manage this process through early reservation of appropriate delivery slots and constant communication with its equipment suppliers.

Raw Materials and Supplies

The raw materials used in the Company's semiconductor fabrication process include polished silicon wafers, chemicals, metals such as titanium and aluminum, gases and subsidiary materials. Wafers are the most significant raw material in terms of cost, representing approximately 10% of the Company's cost of sales in recent years. The other principal raw materials used in assembly include substrates, gold wire, wafer backside lamination tape and printed circuit boards. The Company sources most of its raw materials, including wafers, from suppliers in Japan, the United States and Korea. In addition, the Company's manufacturing processes also require a significant amount of electricity and purified water. In order to obtain reliable electric power and water suppliers, the Company maintains back-up power facilities and water storage facilities.

The Company is not dependent on any one supplier for a substantial portion of its raw material requirements for assembly and testing, and the Company believes that it generally has access to alternative sources of supply for its principal raw materials. However, from time to time, the Company and other semiconductor manufacturers have experienced shortages and increases in lead times for delivery of raw materials, which in turn have resulted in interruptions in production and delivery of products in the past. To minimize the potential for significant interruptions of supplies of principal raw materials, the Company has entered into multi-year supply agreements with its key material suppliers and plans to enter into similar agreements with other major suppliers, as well as diversify the geographic location of key suppliers.

The Company's purchasing policy focuses on the capability of a supplier to meet its development and mass production requirements. The Company's principal raw material suppliers are selected on the basis of internal regulations by its engineers, quality control staff and purchase staff. The Company's purchases are generally planned at the end of the year based on the non-binding forecasts provided by its customers. To improve material quality, the Company has also undertaken regular information exchange and joint research and product development with strategic suppliers of raw materials.

Manufacturing

Manufacturing Processes

DRAMs are made using one of two basic technologies, commonly referred to in the DRAM industry as "stack" and "trench" technology. In stack technology, each storage capacitor is stacked on top of the transistor which in turn is on the surface of the substrate. In trench technology, each capacitor is built by etching a hole into the substrate. The Company currently utilizes the more widely

adopted stack technology. The Company believes that stack technology has better potential than trench technology to accommodate future advances in DRAM technology.

The front-end production of a semiconductor begins with the mask-making process, in which each layer of the pattern of the circuit is duplicated on a photographic negative, known as a mask, by an electron beam generator. Next, raw silicon wafers are oxidized and modified to form transistors, and semiconductor materials are applied to the wafer in multiple layers through a series of patterning, etching, deposition and implantation processes. Each of these processes is conducted in a highly controlled, clean environment. Dust particles, equipment errors, minute impurities in materials or defects in photo masks cause wafers to be discarded or chips to be non-functional.

The back-end production process involves inspection of individual semiconductors, called “chips” or “dies.” Chips that fail this test are either scrapped or repaired by laser trimming. A wafer is then cut into individual dies. Good chips are connected to a conductive lead frame through wire bonding and the bonded semiconductors are then encapsulated using a plastic mold compound or a ceramic casing. These packaged semiconductors are fully tested for functionality and reliability by specialized testing equipment.

The manufacturing process for NAND flash memory is substantially similar to that of DRAMs, but due to the lack of a capacitor manufacturing step, requires fewer process steps and less equipment for mass production. Consequently, NAND flash memory production, as compared to that of DRAMs, results in reduced investments, lower cost, increased efficiency in utilizing fab space, reduced yield risk and reduced turn-around time.

Due to the competitive nature of the memory semiconductor market, manufacturers are continually seeking the most efficient production methods to maintain a low cost base. The four most important determinants of competitive advantage are:

Yield. Yield means the percentage of “good dies” per wafer. Manufacturing processes and quality control need to be optimized to generate maximum yield.

Line width. Line width is the minimum feature size or distance between two features (lines) on a chip. Transitioning to finer line-widths is important in order to increase the number of dies per wafer and eventually reduce cost per bit. Leading manufacturers are currently manufacturing at line widths of 1x nanometer class and 1y nanometer class technology for DRAMs. Different manufacturers define line width differently and there may be slight variations in feature size for any given line-width process technology.

Wafer size. The number of chips produced depends on the technology used and the size of the wafer. Most semiconductor manufacturers, including the Company, are currently manufacturing using wafers with a diameter of 12 inches.

Density. Density is measured by the number of memory cells per chip. For a given wafer size, assuming the same process technology, doubling the density doubles the area used on the wafer and the price received upon selling the chip. The assembly and final testing costs remain the same.

Manufacturing Facilities

The Company owns and operates fabs located in Icheon and Cheongju, Korea and Wuxi, China. The Icheon facility is located approximately 80 kilometers from Seoul. The Cheongju facility is located approximately 140 km from Seoul. The Wuxi facility is located approximately 140 kilometers from Shanghai.

The following table sets forth information regarding the Company's fabs as of June 30, 2019:

Fab	Product Category	Commencement of Operations	Primary Technology
Icheon, Korea			
M10	DRAM and CMOS image sensors	Third quarter of 2005	1x nanometer and 2z nanometer for DRAM 13m pixel and 16m pixel for CMOS image sensors
M14	DRAM and NAND flash	Third quarter of 2015	1y nanometer and 1x nanometer for DRAM 3D 72 layer for NAND flash
Cheongju, Korea			
M11	NAND flash	Second quarter of 2008	3D 72 layer and 2D
M12	NAND flash	Second quarter of 2012	3D 72 layer and 2D
M15	NAND flash	Fourth quarter of 2018	3D 72 layer
Wuxi, China			
C2	DRAM	Third quarter of 2006	1x nanometer and 2z nanometer
C2F	DRAM	First quarter of 2019	1x nanometer and 2z nanometer

The Company's fabs operate 365 days a year, 24 hours a day on a three-shift, eight hours per shift basis. Maintenance at each facility is performed concurrently with production. The Company's fabs are staffed with engineers, technicians and other employees whose duty is to monitor design and production processes to ensure high quality. These employees include line inspectors who work with members of the production staff to conduct examination, testing and fine-tuning of products during the production process. Quality control personnel are involved from initial design to production. In 2017, 2018 and the first half of 2019, the Company operated at 100% of its production capacity. However, the Company may periodically adjust its capacity utilization rate based on market demand for the Company's products, the production outlook of the global memory semiconductor industry as well as global economic conditions in general. Based on its assessment of such market conditions, the Company currently plans to reduce its overall production of memory semiconductors in the second half of 2019, and convert a DRAM production line in its M10 fab in Icheon, Korea to increase production of CMOS image sensors.

The Company also owns and operates assembly and testing facilities for back-end processing of its products in Icheon and Cheongju, Korea and Chongqing, China. The Company also utilizes a factory operated by HITECH Semiconductor (Wuxi) Co., Ltd. ("HITECH Semiconductor") in Wuxi, China, a joint venture company established by the Company and Wuxi Taiji Industry Co., Ltd. ("Wuxi Taiji Industry"). The Company holds a 45.0% interest in the joint venture.

As part of the Company's efforts to reduce unit manufacturing costs, improve manufacturing yields and enhance its profitability, the Company periodically phases out the operations of its older fabs as well as upgrading them to new fabs that implement more advanced processing technologies. In addition to regular maintenance and enhancement of existing fabs, the Company's current on-going capital expenditure projects include the construction of its M16 fab in Icheon, Korea starting in December 2018 with completion targeted for October 2020, as well as the construction of a semiconductor foundry plant in Wuxi, China starting in August 2018 with completion targeted for December 2019 through a joint venture with Wuxi Industrial Development Group, an investment firm under the Wuxi regional government in China. SK hynix system IC holds a 50.1% interest in the joint venture. As part of its efforts to ensure its long-term competitiveness, the Company has also

announced initiatives to secure land in Yongin, Korea by 2022 in order to construct its next generation of fabs.

The Company's cash outflows for acquisition of property, plant and equipment amounted to ₩5,956 billion in 2016, ₩9,128 billion in 2017, ₩16,036 billion in 2018 and ₩8,497 billion in the first half of 2019. In the second half of 2019, the Company plans to reduce its capital expenditures compared to the amount invested in the first half of 2019. The Company periodically adjusts its capital expenditure plans on an on-going basis subject to market demand for the Company's products, the production outlook of the global memory semiconductor industry as well as global economic conditions in general. The Company may delay or not implement some of its announced capital expenditure plans based on its assessment of such market conditions.

Research and Development

The Company competes in an industry characterized by rapid technological changes. The Company believes that it must continue to develop technologically advanced products and manufacturing processes in order to remain competitive in the memory semiconductor industry. The Company's main research and development facilities are located in Icheon, Korea and the Company engages in various research and development activities, including in the areas of advanced process development, circuit and layout design, enhancement of manufacturing processes, process integration, photo mask design and development, physical and electrical analysis and simulation and modeling. The Company incurred expenditures on research and development of ₩2,097 billion in 2016, ₩2,487 billion in 2017, ₩2,895 billion in 2018 and ₩1,531 billion in the first half of 2019. Of such amounts, the Company capitalized development costs of ₩352 billion in 2016, ₩512 billion in 2017, ₩611 billion in 2018 and ₩167 billion in the first half of 2019 as intangible assets.

The Company has entered into a number of licensing and cross-licensing agreements with other manufacturers pursuant to which it obtains access to advanced technologies for incorporation into its own manufacturing processes. See "—Patents and Licensed Technologies."

Patents and Licensed Technologies

Both the Company's ability to develop its own technologies as well as its access, through licenses or other arrangements, to technologies of other leading international companies are important to the Company's ability to design and manufacture competitive products. The Company's success depends in part on its ability to obtain patents, licenses and other intellectual property rights relating to its products. As of June 30, 2019, the Company and its significant subsidiaries (SK hynix memory solutions America Inc. and SK hynix system IC) owned 2,467 patents and 76 trademarks in Korea and 10,761 patents and 166 trademarks outside Korea. As of the same date, the Company and its significant subsidiaries had 9,536 patent and trademark applications pending in Korea and abroad. The Company's patents are related primarily to semiconductors and semiconductor manufacturing processes.

The Company also licenses a number of patented technologies and processes from third parties under cross-licensing, technical assistance and other agreements. These agreements generally grant the Company a non-exclusive license to manufacture products in return for payment of royalties or a cross-license to manufacture and sell certain products both in Korea and overseas during a fixed but usually renewable term. The Company considers its technical assistance and licensing agreements to be important to its business and believes that it will be able to negotiate additional licenses as needed and renew existing agreements on commercially reasonable terms that will not adversely affect the Company's ability to use the related technology.

Environmental Matters

The Company's manufacturing operations use and generate a variety of chemicals and gases, and the Company is subject to certain regulations relating to the use, storage, discharge and disposal of such chemicals and gases and other emissions and waste. The Company is vigorous in its efforts to engage in environmentally responsible management of, and to protect the environment from damage resulting from, its operations. The Company believes that its levels of pollution control are higher than those mandated by Korean and Chinese government standards. The Company employs licensed environmental specialists for various environmental areas, including air quality, water quality, toxic materials and radiation. The Company also operates a comprehensive environmental management system to eliminate or minimize the possible negative effects of its manufacturing processes on the environment and employees. The Company educates and trains its employees in environmental issues and the proper handling of hazardous substances and requires adherence to corporate guidelines on environmental protection measures.

The Company undergoes periodic inspection by both internal and external inspectors in accordance with ISO 14001 standards to monitor the operation and maintenance of its environmental management system. In order to continue certification, the Company is required to meet annual requirements in environmental policy, compliance, planning, management, structure and responsibility, training, communication, document control, operational control, emergency preparedness and response, record keeping and management review. The Company also undergoes periodic inspection by both internal and external inspectors in accordance with OHSAS 18001 and KOSHA 18001 standards to monitor the operation and maintenance of its occupational health and safety management systems.

In addition, the Company has taken measures to ensure that it is proactively addressing issues related to climate change. The Company has established a framework called the 2022 Environmental and Clean Operation Vision (the "2022 ECO Vision"), which sets forth a comprehensive strategy for mitigating the adverse environmental impact from its operations. Pursuant to the 2022 ECO Vision, the Company closely monitors and analyzes its greenhouse gas emissions on a monthly basis and continually seeks to initiate company-wide projects to reduce such emissions in connection with its manufacturing process, including upgrading of production facilities and installment of equipment that enhances energy efficiency. In addition, the 2022 ECO Vision seeks to enhance the Company's efforts in recycling waste, increasing the use of renewable energy, creating a disposable-free work environment and saving water resources. As part of the Company's efforts to promote eco-friendly initiatives in the semiconductor industry, the Company also operates an alliance with its suppliers called the ECO Alliance. Members of the ECO Alliance hold quarterly meetings to discuss the latest environmental issues and developments, establish common environmental goals to be pursued jointly and share environmentally friendly technology and know-how, in order to more effectively accomplish the objectives of the alliance.

Insurance

The Company maintains property insurance policies with reputable insurance companies covering its equipment, manufacturing facilities, research and development facilities and inventory. These insurance policies cover losses due to fire, earthquake, flood and other natural disasters. The Company also maintains liability and casualty insurance policies that cover various incidents, including work-related injuries to employees, product liability, environmental pollution liability and director and officer liability. The Company considers its insurance coverage to be consistent with market practice in the Korean semiconductor industry.

Employees

As of June 30, 2019, the Company, on a stand-alone basis, had 27,768 full-time employees. As of December 31, 2018, the Company, on a stand-alone basis, had 25,972 full-time employees, and the Company and its subsidiaries had 33,190 full-time employees. The Company's success depends to a significant extent upon its ability to attract, retain and motivate qualified employees. Such employees, particularly engineers, production managers and technicians in the memory semiconductor industry, are in high demand, and the Company devotes significant resources to identifying, hiring, training, successfully integrating and retaining these employees. The Company seeks to leverage the SK Group's brand-recognition to attract top-tier talent from both Korea and abroad and strives to maintain an entrepreneurial, productive and innovation-focused culture.

The Company grants annual increases in basic wages and pays periodic bonuses. The Company also provides benefits such as medical insurance, employment insurance and workers' compensation to its employees as well as providing fringe benefits including housing loans, periodic health checkups and the provision of childcare and recreational facilities. As of June 30, 2019, the Company had three labor unions, all of which have collective bargaining agreements with the Company. As of such date, the two largest of such labor unions had 13,024 of the Company's employees as their members. In recent years, the Company has not experienced a strike or other material work stoppage and considers labor relations with its work force to be good.

The Company's full-time employees in Korea, including executive officers as well as non-executive employees, are subject to a pension insurance system pursuant to the National Pension Act of Korea, under which the Company makes monthly contributions to the pension accounts of the employees, and upon retirement, such employees are paid from their pension accounts. The Company contributes an amount equal to 4.5% of an employee's standard monthly wages, and each employee contributes 4.5% of his or her standard monthly wages, into his or her personal pension account. The Company also operates defined benefit and defined contribution retirement pension plans for its employees. For further information regarding the Company's obligations under its retirement pension plans, see Notes 19 and 20 of the notes to its annual financial statements as of and for the years ended December 31, 2017 and 2018 and Note 20 of the notes to its interim financial statements, appearing elsewhere in this Offering Circular.

Litigation and Regulatory Proceedings

The Company is subject to a number of claims and is a party to a number of legal and regulatory proceedings, including those that are incidental to the normal course of its business.

Patent Infringement Claims and Litigations

Netlist, Inc. ("Netlist") filed lawsuits against the Company and its subsidiaries alleging infringement of multiple patents (i) in the U.S. International Trade Commission in September 2016 and October 2017, (ii) in the U.S. District Court for the Central District of California in August 2016 and June 2017, (iii) in the German District Court of Munich in July 2017 and (iv) in the Beijing Intellectual Property Court in July 2017.

With respect to the lawsuit filed in the U.S. International Trade Commission in September 2016, the commission concluded in January 2018 that the Company and its subsidiaries did not infringe the patents of Netlist. Subsequently, Netlist filed an additional petition in March 2018, and the proceeding relating to such petition is currently pending. In addition, the second lawsuit filed in the U.S. International Trade Commission in October 2017 as well as the lawsuits filed in the U.S. District Court for the Central District of California are all pending. The Company believes that it has meritorious defenses to such claims, and the Company intends to vigorously defend against such lawsuits.

Regarding the lawsuit filed against the Company in the German District Court of Munich, the court determined in January 2019 that the Company did not infringe the patents of Netlist, which determination became final and conclusive in June 2019. In addition, regarding the lawsuit filed against the Company in the Beijing Intellectual Property Court, the Patent Reexamination Board determined in May 2018 that the patent was invalid. Accordingly, the patent infringement lawsuit was dismissed in June 2018, and Netlist has not appealed the Patent Reexamination Board's decision that invalidated the patent.

In the past, the Company has responded to various other claims related to intellectual property rights and has recognized a liability when it believes that a claim represents a present obligation as a result of past events and it is probable that an outflow of resources will arise and a loss can be reliably estimated.

Class Action Lawsuit in the U.S. and Canada

In April 2018, a class-action lawsuit was filed against the Company, SK hynix America Inc. and other DRAM manufacturers in the U.S. District Court for the Northern District of California, asserting claims based on alleged price-fixing of DRAMs from June 1, 2016 to February 1, 2018. Similar lawsuits were subsequently filed in another federal court in the U.S., as well as in Canadian courts in British Columbia, Quebec and Ontario. All of such cases are currently pending. The Company believes that it has meritorious defenses to such claims, and the Company intends to vigorously defend against such lawsuits.

Anti-trust Investigation in China

In May 2018, the State Administration for Market Regulation of China initiated an investigation into alleged violation of antitrust laws relating to the Company's sales of DRAMs in China. The investigation is ongoing, and the Company is currently unable to predict the outcome of the investigation.

MANAGEMENT

Board of Directors

The board of directors has ultimate responsibility for the management of the Company's business affairs. The Company is required to have six or more directors but the number of directors may not exceed ten directors, and outside directors must constitute a majority of the total number of directors in accordance with the Company's articles of incorporation. All directors are required to be elected by an affirmative vote of a majority of shares present at the general meeting of shareholders, provided that such affirmative votes may not be less than one-fourth of the total issued and outstanding shares. In the election of an Audit Committee member who is also an outside director, shareholders who own voting shares in excess of 3% of the total voting shares may not exercise their voting rights with respect to such excess shares under the Korean Commercial Code and the Company's articles of incorporation. The term of office of a director will expire upon the close of the third ordinary general meeting of shareholders to be convened after his or her inauguration.

Outside directors are non-standing directors elected from among those persons who do not have a special relationship with the Company that would interfere with the exercise of their independent judgment. The Outside Director Nomination Committee recommends the candidates for outside directors to the general meeting of shareholders. The Company's articles of incorporation require that candidates for outside directors have professional knowledge or experience in management, economy, law or relevant technologies and satisfy the eligibility requirements under the Korean Commercial Code and other relevant laws and regulations.

The representative director is a director elected by a majority of the board of directors and is empowered to make decisions regarding the Company's day-to-day business as its chief executive officer. Seok-Hee Lee, the Company's chief executive officer and president, serves as the Company's representative director.

Directors and Executive Officers

The tables below set forth information regarding the Company's directors and executive officers as of the date of this Offering Circular. The business address of each of the Company's directors and executive officers is at the Company's registered office at 2091, Gyeongchung-daero, Bubal-eub, Icheon-si, Gyeonggi-do, Korea. Except for Jung-Ho Park, chairman of the board (who concurrently serves as the chief executive officer of SK Telecom Co., Ltd.), Tae-Won Chey, chairman (who serves as the chairman of the SK Group) and the outside directors, all of the Company's directors and executive officers are employed by the Company on a full-time basis.

Directors

Name	Position	First Elected	End of Current Term
Jung-Ho Park	Chairman of the Board	March 2017	March 2020
Seok-Hee Lee	Chief Executive Officer and President	March 2017	March 2020
Jong-Hoon Oh	Executive Vice President	March 2019	March 2022
Jong-Won Choi	Outside Director	March 2014	March 2020
Chang-Hwan Shin	Outside Director	March 2017	March 2020
Ho-Keun Song	Outside Director	March 2018	March 2021
Hyeon-Jae Cho	Outside Director	March 2018	March 2021
Tae-Hwa Yun	Outside Director	March 2018	March 2021
Yung-Ku Ha	Outside Director	March 2019	March 2022

Executive Officers (Other than Directors)

Name	Position	First Elected/ Appointed	Office/Department
Tae-Won Chey	Chairman	February 2012	Chairman
Sung-Wook Park	Vice Chairman	March 2009	Vice Chairman
Dong-Sub Kim	President	August 2018	Communication and External Affairs Division
Tae-Sung Chung	President	March 2017	NAND and Solution Development Division
Tony-Yoon	Executive Vice President	December 2017	NAND Solution Division
Jin-Kuk Kim	Executive Vice President	December 2017	Research and Development Division
Jin-Seok Cha	Executive Vice President	January 2019	Chief Financial Officer
Hyeon-Jong Song	Executive Vice President	December 2015	Global Growth Strategy Division
Sang-Seon Lee	Executive Vice President	December 2016	Manufacturing Technology Division
Gyo-Won Jin	Executive Vice President	December 2016	DRAM Development and Business Division
Sun-Yub Hyun	Executive Vice President	December 2016	Corporate Culture Division
Sung-Joo Hong	Executive Vice President	March 2007	CIS Business Division

Committees of the Board of Directors

The Company currently has three committees that serve under its board of directors:

- Audit Committee;
- Outside Director Nomination Committee; and
- Sustainability Management Committee.

The Company's board of directors may establish other committees if it deems them necessary. The Company's board of directors appoints each member of these committees, except for members of the Audit Committee.

Audit Committee

Under Korean law and the Company's articles of incorporation, the Company is required to have an Audit Committee consisting of three or more directors at least two-thirds of whom must be outside directors. Members of the Audit Committee are elected by the Company's shareholders at the general meeting of shareholders.

The Company's Audit Committee is responsible for reviewing the Company's business affairs and accounts and monitoring the various matters carried out by the board of directors. The Audit Committee also has the right to request the board of directors to convene an extraordinary general meeting of shareholders by presenting a written statement to the board that sets forth the agenda of the meeting and grounds for convening the meeting. The Company is required to appoint independent auditors selected by its Audit Committee and to report such appointment to the Company's shareholders at the general meeting of shareholders or to notify the shareholders as of the latest record date of such appointment in writing or by electronic mail or by disclosure on the Company's website. Currently, the Company's Audit Committee consists of three directors: Jong-Won Choi, Chang-Hwan Shin and Tae-Hwa Yun. The chairman of the committee is Jong-Won Choi.

The committee holds meetings at least once each quarter, and more frequently as needed.

Outside Director Nomination Committee

The Company's Outside Director Nomination Committee is responsible for reviewing and recommending candidates for outside directors for election at the general meeting of shareholders. Currently, the Company's Outside Director Nomination Committee consists of three members: Jong-Won Choi, Seok-Hee Lee and Hyeon-Jae Cho. The chairman of the committee is Jong-Won Choi.

The committee holds regular meetings prior to the annual general meeting of shareholders, and more frequently as needed.

Sustainability Management Committee

The Company's Sustainability Management Committee is responsible for reviewing and resolving matters regarding contributions exceeding ₩1 billion and sustainability management strategies and results. Currently, the Substantiality Management Committee consists of three members: Ho-Keun Song, Hyeon-Jae Cho and Jong-Hoon Oh. The chairman of the committee is Ho-Keun Song.

The committee holds meetings at least once each quarter, and more frequently as needed.

Compensation of Directors

The aggregate remuneration paid and benefits in kind granted to the Company's directors, including directors who also held executive officer positions at the Company, was approximately ₩6 billion in 2018.

As of June 30, 2019, there were no outstanding transactions other than in the ordinary course of business undertaken by the Company in which its directors or executive officers were interested parties. As of June 30, 2019, there were no loans granted by the Company or its subsidiaries to any of its directors and executive officers.

Stock Option Plan

The Company believes that the use of stock options is an important element of its strategy to maintain a highly motivated management team and to align the interests of senior management with those of the Company's shareholders. Under Korean law, subject to certain exceptions, the Company may by special resolution of the shareholders grant stock options to its officers and employees who have contributed or are expected to contribute to the management and technical innovation of the Company, up to an aggregate of 15% of the total number of its then-issued and outstanding shares. Stock options to officers and employees other than directors may also be granted pursuant to a resolution of the Company's board of directors in an amount not exceeding 10% of the total number of Company's then-issued and outstanding shares. As of June 30, 2019, the Company had outstanding stock options in respect of an aggregate of 506,402 common shares.

SHARE OWNERSHIP

The following table sets forth information relating to the Company's shareholder composition as of June 30, 2019:

Shareholder	Number of Common Shares	Ownership Percentage
SK Telecom	146,101,132[1]	20.1%
National Pension Service	65,890,385	9.1
The Capital Group Companies, Inc.[2]	52,144,494	7.2
BlackRock Fund Advisors[3]	37,011,690	5.1
Others	426,854,664	58,6
Total issued and outstanding common shares	728,002,365	100.0%

(1) Includes (i) 44,250,000 shares that SK Telecom acquired from the former creditors of Hynix Semiconductor, (ii) 101,850,000 shares from the issuance of new shares by the Company and (iii) 1,132 shares owned by specially-related parties of the Company.

(2) Based on the shareholding report on change in beneficial ownership filed by The Capital Group Companies, Inc., dated June 10, 2019.

(3) Based on the shareholding report on change in beneficial ownership filed by BlackRock Fund Advisors, dated May 14, 2018.

Except as described above, no other person or entity known by the Company to be acting in concert, directly or indirectly, jointly or severally, owned 5% or more of the Company's issued and outstanding common shares or exercised control or could exercise control over the Company as of the date of this Offering Circular.

SK GROUP

The SK Group is Korea's third largest business group in terms of combined assets as of December 31, 2018, according to the Korea Fair Trade Commission, and is comprised of approximately 111 companies. As of December 31, 2018, the total assets of the member companies of the SK Group amounted to approximately ₩218 trillion, according to the Korea Fair Trade Commission. The SK Group has played a key part in the development of the Korean economy, encouraged by the Government's focus on export-oriented industrialization.

Founded in the early 1950s as a textile manufacturer, the SK Group has evolved into a major business group, with interests in the energy, chemical, semiconductor, information technology, telecommunications, construction, logistics and service industries. SK Holdings became the holding company of the group on July 1, 2007. Member companies of the SK Group are organized into three sub-groups: the energy and chemicals group, the semiconductor, telecommunications and information technology group and the construction, logistics and services group. The following chart shows select member companies of the SK Group as of June 30, 2019:

Energy and chemicals	Semiconductor, telecommunications and information technology	Construction, logistics and services
SK Innovation	SK hynix	SK Engineering & Construction
SK Energy	SK Telecom	SK Networks
SK Global Chemical	SK Planet	SK Shipping
SK Incheon Petrochem	SK Broadband	SK Securities
SK Lubricants	SK Telesys	
SK Trading International	SK Telink	
SK Discovery	SK Communications	
SK E&S	SK Materials	
SK Gas		
SKC		

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The Company engages from time to time in various transactions with related parties. The Company believes that it has conducted its transactions with related parties as it would in comparable arm's-length transactions with a non-related party, on a basis substantially as favorable to the Company as would be obtainable in such transactions.

Under the Korean Commercial Code, any transaction between the Company and any of its directors, major shareholders or certain related parties of such directors or major shareholders must be approved by the Company's board of directors (by the affirmative vote of two-thirds or more of the directors).

In addition, in the event that the Company enters into a transaction with its specially-related parties such as its affiliates, the Company is required to (i) obtain approval from its board of directors and (ii) disclose such transaction pursuant to the Monopoly Regulation and Fair Trade Act. The transactions that require approval from the Company's board of directors and disclosure pursuant to the Monopoly Regulation and Fair Trade Act are those where the transaction value (the aggregate amount incurred over a fiscal quarter in case of the fourth item below) (i) exceeds 5% of the greater of the Company's total equity or paid-in capital or (ii) exceeds ₩5 billion, in the following four categories:

- providing funds for or dealing with provisional payment or loan payment;
- providing or dealing with securities such as stocks or corporate bonds;
- providing or dealing with assets such as real estate or intangible assets; and
- providing services or products for or dealing with certain affiliates which satisfy the requirements under the Enforcement Decree of the Monopoly Regulation and Fair Trade Act, as a counterpart or on behalf of such affiliate.

A summary of the Company's material transactions with related parties is set forth below.

Transactions with SK Engineering & Construction Co., Ltd.

The Company's transactions with SK Engineering & Construction Co., Ltd. ("SK E&C") consist primarily of SK E&C's construction of facilities and the Company's acquisition of such assets. SK E&C is a subsidiary of SK Holdings Co., Ltd. and a leading construction company in Korea. The Company's acquisition of assets from SK E&C amounted to ₩659 billion in 2016, ₩1,465 billion in 2017, ₩2,484 billion in 2018 and ₩588 billion in the first half of 2019.

Transactions with ESSENCORE Limited

The Company's transactions with ESSENCORE Limited ("ESSENCORE") consist primarily of sales of the Company's NAND flash memory products. ESSENCORE is a subsidiary of SK Holdings Co., Ltd. Operating revenues and others received from ESSENCORE amounted to ₩572 billion in 2016, ₩749 billion in 2017, ₩917 billion in 2018 and ₩398 billion in the first half of 2019.

Transactions with HITECH Semiconductor

The Company's transactions with HITECH Semiconductor consist primarily of provision by HITECH Semiconductor of back-end processing services for the Company's products. HITECH Semiconductor is a provider of integrated circuit packaging and testing services for semiconductors and was established in November 2009 as a joint venture between the Company and Wuxi Taiji Industry. As of June 30, 2019, the Company held a 45.0% interest in HITECH Semiconductor. Operating expenses and others paid to HITECH Semiconductor amounted to ₩569 billion in 2016, ₩583 billion in 2017, ₩622 billion in 2018 and ₩330 billion in the first half of 2019.

For further information relating to the Company's transactions with related parties, see Note 33 of the notes to its annual financial statements as of and for the years ended December 31, 2017 and 2018 and Note 32 of the notes to its interim financial statements, appearing elsewhere in this Offering Circular.

TERMS AND CONDITIONS OF THE NOTES

The following is a description of the Terms and Conditions of the Notes, which (subject to modification and except for the paragraphs in italics) will be endorsed on the Notes in definitive form (if issued).

The Notes, which expression shall in these Terms and Conditions, unless the context otherwise requires, include any further notes issued pursuant to Condition 14 and forming a single series with the Notes of SK hynix Inc. (the "Company"), will be issued by the Company (or any successor to the Company) subject to and with the benefit of a Fiscal Agency Agreement dated September 17, 2019 (such agreement as amended and/or supplemented and/or restated from time to time, the "Fiscal Agency Agreement") made among the Company, The Bank of New York Mellon, London Branch, as the Fiscal Agent and principal paying agent (in such capacity, the "Principal Paying Agent") and The Bank of New York Mellon SA/NV, Luxembourg Branch as registrar (the "Registrar") and transfer agent (the "Transfer Agent") and any other agent or agents appointed from time to time with respect to the Notes.

The statements in these Terms and Conditions include summaries of, and are subject to, the detailed provisions of and definitions in the Fiscal Agency Agreement. Copies of the Fiscal Agency Agreement are available for inspection during normal business hours (being between 9:00 am to 3:00 pm) by the holders of the Notes following prior written request and satisfactory proof of holding at the specified office of the Principal Paying Agent or any other paying agent that the Company may appoint, as may be required from time to time (references herein to "Paying Agents" shall refer to the Principal Paying Agent and any paying agents so appointed). The holders are entitled to the benefit of, are bound by, and are deemed to have notice of, all the provisions of the Fiscal Agency Agreement applicable to them. In these Terms and Conditions, references to the Agents (as defined below) shall include any successor appointed under the Fiscal Agency Agreement, and references to the Company shall include any successor company or business entity succeeding to obligations under the Notes.

In acting under the Fiscal Agency Agreement the agents appointed by the Company (the "Agents" and each an "Agent") 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 Noteholders except as specifically described in the Fiscal Agency Agreement or below.

1 FORM, DENOMINATION AND TITLE

1.1 Form and Denomination

The Notes are issued in registered form, without detachable coupons, in the minimum denomination of US$200,000 and integral multiples of US$1,000 in excess thereof. A Certificated Note (as defined below) will be issued to each Holder (as defined below) in respect of its registered holding of the Notes. Each Certificated Note will be numbered serially with an identifying number which will be recorded on the relevant Certificated Note and in the register of Holders (the "Register") which the Company will procure to be kept by the Registrar. Upon issuance, the Notes will initially be represented by a global note (the "Global Note") deposited with and registered in the name of a nominee of a common depositary (the "Common Depositary") for Euroclear Bank SA/NV as operator of the Euroclear System ("Euroclear") and Clearstream Banking S.A. ("Clearstream"). The Notes shall be tradeable only in principal amounts of at least US$200,000 and integral multiples of US$1,000 in excess thereof. For so long as the Notes are listed on the Singapore Exchange Securities Trading Limited (the "SGX-ST") and the rules of the SGX-ST so require, the Notes, if traded on the SGX-ST, will be traded in a minimum board lot size of S$200,000 (or its equivalent in foreign currencies). Except in the limited circumstances described in Condition 1.3 below, owners of beneficial interests in the

Global Note will not be entitled to receive physical delivery of certificates representing their Notes. The laws of certain jurisdictions require that certain purchasers of the Notes take physical delivery of such Notes in certificated form. Accordingly, the ability of beneficial owners to own, transfer or pledge beneficial interests in the Global Note may be limited by such laws.

1.2 Title

Title to the Notes passes only by registration in the Register. The holder of any Note will (except as otherwise required by law) be treated as its absolute owner for all purposes (regardless of any notice of ownership, trust or any interest or any writing on, or the theft or loss of, the Certificated Notes (as defined below) issued in respect of it) and no person will be liable for so treating the holder. In these Conditions, "Holder" and (in relation to a Note) "holder" and "Noteholder" means the person in whose name a Note is registered in the Register (or, in the case of a joint holding, the first named thereof).

1.3 Certificated Notes

The Company will execute and deliver to the Registrar, and the Registrar will authenticate, physical definitive certificates representing the Notes (the "Certificated Notes") in exchange for the Global Note, if: (i) either Euroclear or Clearstream or a successor clearing system is closed for business for a continuous period of 14 days (other than by reason of holidays, statutory or otherwise) or announces an intention permanently to cease business or does in fact do so; or (ii) an Event of Default (as defined below) has occurred and is continuing.

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

2 STATUS

The Notes constitute direct, unconditional, unsubordinated and, subject to the provisions of Condition 3, unsecured obligations of the Company and shall at all times rank *pari passu* and without any preference or priority among themselves and, subject to the provisions of Condition 3, with all other present and future direct, unconditional, unsubordinated and unsecured obligations of the Company, except as may be required by mandatory provisions of law.

3 CERTAIN COVENANTS

3.1 Negative Pledge

So long as any of the Notes remains outstanding, the Company will not create or permit to be outstanding any mortgage, charge, lien, pledge or other security interest (each a "Security Interest") upon the whole or any part of its property, assets or revenues, present or future, to secure for the benefit of the holders of any International Investment Securities (as defined below):

(a) any payment of any sum owing in respect of any such International Investment Securities; or

(b) any payment under any guarantee or other like obligation of any such International Investment Securities; or

(c) any payment under any indemnity or other like obligation relating to any such International Investment Securities,

without in any such case at the same time according to the Notes either (i) the same Security Interest as is granted to or is outstanding in respect of such International Investment Securities or (ii) with respect to any guarantee, indemnity or other like obligation, such other arrangement (whether or not comprising a Security Interest) as shall be approved by an Extraordinary Resolution (as defined below).

3.2 Consolidation, Merger and Sale of Assets

The Company will not consolidate with, or merge or amalgamate into, or sell, transfer, lease or convey all or substantially all of its property or assets to any person, except as provided herein. The Company, without the consent of the holders of any of the Notes, may consolidate with, or merge into, or sell, transfer, lease or convey all or substantially all of its property as an entirety to any corporation or business entity organized under the laws of the Republic of Korea; *provided that* (a) any successor corporation or business entity expressly assumes the Company's obligations under the Notes and the Fiscal Agency Agreement, (b) immediately after giving effect to the transaction, no Event of Default 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 transaction, the properties or assets of the Company or any successor corporation or business entity would become subject to any Security Interest which would not be permitted by the Notes, the Company or such successor corporation or business entity, as the case may be, shall take such steps as shall be necessary to secure the Notes equally and ratably with (or prior to) all indebtedness secured thereby, and (d) the Company has delivered to the Fiscal Agent a certificate executed by a duly authorized officer of the Company and an opinion of counsel as to matters of law stating that such consolidation, merger, sale, transfer, lease or conveyance and, if any supplemental agreement(s) is/are required in connection with such transaction, such supplemental agreement(s) 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. The Fiscal Agent shall be entitled to accept and conclusively rely upon such certificate and opinion (without further investigation or enquiry) as sufficient and conclusive evidence of such compliance and the Fiscal Agent shall be protected and shall have no liability to any holder or any person for so accepting and relying on such certificate or opinion.

3.3 Interpretation

For the purposes of these Conditions:

"**International Investment Securities**" means bonds, debentures, notes or investment securities of the Company which:

(a) either are by their terms payable, or confer a right to receive payment, in any currency other than Korean Won or are denominated in Korean Won and more than 50% of the aggregate principal amount thereof is initially distributed outside Korea by or with the authorization of the Company; and

(b) are for the time being, quoted, listed, or ordinarily dealt in or traded on any stock exchange or over-the-counter or other securities market outside Korea.

4 INTEREST

4.1 Interest Payment Dates

The Notes will be issued in an initial aggregate principal amount of US$500,000,000 and will mature at a price equal to 100% of the principal amount on September 17, 2024 (the "Maturity Date"). The Notes will bear interest at a rate of 3.000% per annum from and including September 17, 2019 or from the most recent interest payment date to which interest has been paid or provided for. Interest on the Notes will be payable semi-annually in arrears on March 17 and September 17 of each year (each an "Interest Payment Date") with the first interest payment to be made on March 17, 2020.

4.2 Interest Accrual

Each Note will cease to bear interest from and including its due date for redemption unless, upon due presentation, payment of the principal in respect of the Note is improperly withheld or refused or unless default is otherwise made in respect of payment. In such event, interest will continue to accrue until whichever is the earlier of:

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

(b) five days after the date on which the full amount of the moneys payable in respect of such Notes has been received by the Fiscal Agent and notice to that effect has been given to the Noteholders in accordance with Condition 12.

4.3 Calculation of Broken Interest

When interest is required to be calculated in respect of a period of less than a full year, it shall be calculated on the basis of a 360-day year consisting of 12 months of 30 days each and, in the case of an incomplete month, the number of days elapsed on the basis of a month of 30 days.

Interest in respect of any Note shall be calculated per US$1,000 in principal amount of the Notes (the "Calculation Amount"). The amount of interest payable per Calculation Amount for any period shall be equal to the product of the rate of interest specified above, the Calculation Amount and the day-count fraction for the relevant period, rounding the resulting figure to the nearest cent (half a cent being rounded upwards).

5 PAYMENTS

5.1 Payment

Payments of principal and interest in respect of each Note will be made by transfer to the registered account of the Holder. Interest on Notes due on an Interest Payment Date will be paid to the holder shown on the Register at the close of business on the date (the "record date") being the fifteenth day before the due date for the payment of interest; provided that, the record date for any Interest Payment Date will be, with respect to Notes represented by a Global Note, the close of business on the Clearing System Business Day immediately prior to the Interest Payment Date, where "Clearing System Business Day" means Monday to Friday inclusive except December 25 and January 1.

For the purposes of this Condition 5.1, a Holder's "registered account" means the U.S. dollar account maintained by or on behalf of it with a bank in the United States that processes payments in U.S. dollar, details of which appear on the Register at the close of business on the relevant record date, and a Holder's "registered address" means its address appearing on the Register at that time.

Where payment is to be made by transfer to a registered account, payment instructions (for value the due date or, if that is not a Payment Business Day, for value the first following day which is a Payment Business Day) will be initiated on the due date for payment, or if that is not a Payment Business Day, on the next succeeding Payment Business Day, without any interest or payment in respect of such delay.

5.2 Agents

The names of the initial Agents and their specified offices are set out in the Fiscal Agency Agreement. The Company reserves the right under and in accordance with the terms of the Fiscal Agency Agreement at any time to remove any Agent, and to appoint other or further agents or a replacement Registrar, *provided that* it will at all times maintain (i) a Fiscal Agent, (ii) a Principal Paying Agent, (iii) a Registrar, (iv) a Transfer Agent and (v) a Singapore Paying Agent (for so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, in the event that the Global Note is exchanged for Certificated Notes). Notice of any such removal or appointment and of any change in the specified office of any Agent will be given promptly by the Company to Noteholders in accordance with Condition 12.

5.3 Payment subject to fiscal laws

All payments in respect of the Notes are subject in all cases to any applicable fiscal or other laws and regulations, but without prejudice to the provisions of Condition 8. No commissions or expenses shall be charged to the Noteholders in respect of such payments.

5.4 Payment date convention

If any Interest Payment Date or the Maturity Date would fall on a day that is not a Payment Business Day, that Interest Payment Date or the Maturity Date will be postponed to the following day that is a Payment Business Day, and no interest shall be payable in respect of any such delay.

5.5 Payment Business Day

In these Conditions, "Payment Business Day" means a day (other than a Saturday or Sunday) on which commercial banks and financial institutions are generally open for business in New York City, London, Seoul, the city where the specified office of the Fiscal Agent is located and (for so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST require the Company to maintain a Singapore Paying Agent) Singapore and, in the case of the surrender of a Certificated Note, in the place of the Transfer Agent or Registrar where the Certificated Note is surrendered.

6 TRANSFERS OF NOTES

6.1 Transfers

Subject as provided in Condition 6.2, a Note may be transferred by depositing the Certificated Note issued in respect of that Note, with the form of transfer on the back duly completed and signed, at the specified office of the Transfer Agent (or, in the case of a Note represented by a Global Note, delivery of a duly executed form of transfer as set forth in the Fiscal Agency Agreement), together with such evidence as the Registrar or the Transfer Agent may require to prove title to the Notes that are the subject of the transfer and the authority of the individuals who have executed the form of transfer. Legal title to the Notes will pass upon registration of such transfer in the Register.

All transfers of Notes and entries in the Register will be made subject to the terms concerning transfers of the Notes provided in the Fiscal Agency Agreement.

6.2 Closed Periods

If Certificated Notes are to be issued in exchange for the Global Note, no Noteholder may require the transfer of a Certificated Note to be registered (i) during the period of 15 days preceding the due date for any payment of principal of, or interest (if any) on, the Notes or (ii) after such Note has been selected or deposited for redemption pursuant to Condition 7.2 or 7.3.

6.3 Regulations

All transfers of Certificated Notes will be made subject to the detailed provisions concerning transfer of Notes set forth in the Fiscal Agency Agreement. The provisions may be changed by the Company with the prior written approval of the Registrar.

7 REDEMPTION AND PURCHASE

7.1 Redemption at Maturity

Unless the Notes have been previously redeemed or repurchased and cancelled as provided below, the Company will redeem the Notes at 100% of their principal amount in U.S. dollars on the Maturity Date. The Notes may be redeemed prior to that date only as provided in Conditions 7.2 and 7.3 below, but without prejudice to Condition 10.

7.2 Redemption for Taxation Reasons

At any time, the Company may, having given not less than 30 or more than 60 days' notice to the holders of the Notes (which notice shall be irrevocable and delivered in accordance with Condition 12), redeem the Notes in whole, but not in part, at 100% of their principal amount plus accrued and unpaid interest, if any, to the date fixed for redemption, *provided that* prior to the delivery of any notice of redemption pursuant to this Condition 7.2, the Company shall deliver to the Fiscal Agent (1) a certificate signed by an authorized officer stating that the obligation to pay Additional Amounts (as defined in Condition 8.1) is as a result of any change in, or amendment to, the laws or regulations of a Relevant Jurisdiction (as defined in Condition 8.2), or any change in the general application or official interpretation of such laws or regulations, which change or amendment becomes effective after the date of the original issuance of the Notes cannot be avoided by the Company taking reasonable measures available to it and (2) an opinion addressed to the Fiscal Agent by an independent law firm of recognized standing admitted to practice in the Republic of Korea to the effect that the Company has or will become obliged to pay such Additional Amounts as a result of a change or amendment referred to above, and the Fiscal Agent shall be entitled to accept and conclusively rely upon such certificate and opinion (without further investigation or enquiry) as sufficient and conclusive evidence of the conditions precedent referred to in this Condition 7.2, in which event it shall be conclusive and binding on the holders of the Notes and the Fiscal Agent shall be protected and shall have no liability to any holder or any person for so accepting and relying on such certificate or opinion.

7.3 Change of Control Put Right

If a Change of Control Triggering Event occurs, Noteholders will have the right (the "Change of Control Put Right") to require the Company to redeem all or any part (equal to US$200,000 or an integral multiple of US$1,000 in excess thereof) of their Notes pursuant to the offer described below (the "Change of Control Offer"). In the Change of Control Offer, the Company will be required to offer payment in cash equal to 100% of the aggregate principal amount of the Notes redeemed plus accrued and unpaid interest, if any, on the Notes redeemed, to the date of redemption (the "Change of Control Payment"). Within 30 days following any Change of Control Triggering Event, the Company will provide

notice to the Noteholders, with a copy to the Agents, describing the events that constitute the Change of Control Triggering Event and offering to redeem the Notes on the date specified in the notice, which date will be no earlier than 30 days and no later than 60 days from the date of such notice (the "Change of Control Payment Date"), pursuant to the provisions of this Condition 7.3. To exercise the Change of Control Put Right, the Holder of the relevant Note must deposit at the specified office of the Fiscal Agent a duly completed and signed Change of Control Put Notice (as defined in the Fiscal Agency Agreement), in the form for the time being current, obtainable from the specified office of the Fiscal Agent during usual business hours (being between 9:00 am to 3:00 pm), together with, in the case of Certificated Notes, the Certificate evidencing the Note to be redeemed, by no later than 10 days prior to the Change of Control Payment Date. To the extent that the provisions of any securities laws (including, without limitation, the Financial Investment Services and Capital Markets Act of Korea) or regulations conflict with this Condition 7.3, the Company will be required to comply with the applicable securities laws and regulations and will not be deemed to have breached its obligations under this Condition 7.3 by complying with such laws and regulations.

On the Change of Control Payment Date, the Company will be required, to the extent lawful, to:

(a) accept for redemption and payment all Notes or portions of Notes properly tendered in the Change of Control Offer pursuant to a duly completed Change of Control Put Notice; and

(b) deposit with the Fiscal Agent an amount equal to the Change of Control Payment in respect of all Notes or portions of Notes properly tendered.

For so long as any Note remains outstanding, the Company shall use commercially reasonable efforts to cause at least two Rating Agencies to maintain ratings of the Notes.

For the purposes of this Condition 7.3:

"Change of Control" means the occurrence of any of the following: (1) the direct or indirect sale, transfer, conveyance or other disposition, in one or a series of related transactions, of all or substantially all of the properties or assets of the Company and its subsidiaries taken as a whole to any person other than the Company or one of its subsidiaries (other than for the purposes of, or pursuant to and followed by, a consolidation, amalgamation, merger or reorganization permitted by Condition 3.2) or (2) if at any time SK Telecom Co., Ltd. and its affiliates cease to hold at least 20% of the Company's outstanding shares.

"Change of Control Triggering Event" means the occurrence of both a Change of Control and a Rating Event.

"Moody's" means Moody's Investors Service, Inc.

"Rating Agencies" means (1) each of Moody's and S&P and (2) if any of Moody's or S&P ceases to rate the Notes or fails to make a rating of the Notes publicly available for reasons outside of the Company's control, a "nationally recognized statistical rating organization" recognized by the United States Securities and Exchange Commission, selected by the Company (as certified by a resolution of the Company's board of directors) as a replacement agency for Moody's or S&P (a "Replacement Agency"), or both of them, as the case may be.

"Rating Event" means the Notes are rated (1) below an investment grade credit rating (Ba1, or equivalent, or worse) by Moody's (or a Replacement Agency therefor) or (2) below an investment

grade credit rating (BB+, or equivalent, or worse) by S&P (or a Replacement Agency therefor) on any date from the date of the public announcement by the Company of an arrangement that could result in a Change of Control until the end of the 60-day period following public announcement by the Company of the occurrence of the Change of Control (which 60-day period shall be extended so long as the rating of the Notes is under publicly announced consideration for possible downgrade by any of the Rating Agencies).

"S&P" means S&P Global Ratings, a division of S&P Global, Inc.

None of the Agents shall have any duty or obligation to verify or be required to monitor or to take any steps to ascertain whether a Change of Control Triggering Event or any event which could lead to the occurrence of a Change of Control Triggering Event has occurred or whether this Condition 7.3 conflicts with any securities laws or regulations, and shall not be liable to any person for not doing so.

The definition of "Change of Control" includes a phrase relating to the sale, transfer, conveyance or other disposition of "all or substantially all" of the property or assets of the Company and its subsidiaries taken as a whole. Although there is a developing body of case law interpreting the phrase "substantially all", there is no precise established definition of the phrase under applicable law. Accordingly, the ability of a Holder to require the Company to repurchase Notes as a result of a sale, transfer, conveyance or other disposition of less than all of the property or assets of the Company and its subsidiaries taken as a whole to another person or group may be uncertain.

7.4 Purchases

The Company or any of its subsidiaries may at any time and from time to time repurchase Notes in the open market or otherwise at any price. Such Notes may be held by the Company, resold or surrendered to the Registrar for cancellation. If purchases are made by tender, tenders must be available to all Noteholders alike.

7.5 Cancellations

All Notes that are redeemed, repurchased or converted and surrendered to the Registrar for cancellation shall forthwith be cancelled. Notes cancelled may not be reissued or resold.

7.6 Redemption Procedures

In the event that the Company is required to deliver a notice to the holders of the Notes under this Condition 7, the Company shall provide, or procure the provision by the Fiscal Agent of, the notice to each holder of the Notes in accordance with Condition 12 and the provisions of the Fiscal Agency Agreement, which notice shall state, to the extent applicable:

(a) the date fixed for redemption;

(b) the applicable redemption price of a Note on the redemption date; and

(c) the names and addresses of all Paying Agents and Registrar.

7.7 Notices Final

Upon the expiry of any notice as is referred to in Condition 7.2 or 7.3 above, the Company shall be bound to redeem the Notes to which the notice refers in accordance with the terms of such Condition.

8 TAXATION

8.1 Additional Amounts

All payments of principal and interest in respect of the Notes, including any Additional Amounts (as defined below), by or on behalf of the Company shall 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 ("Taxes") imposed, levied, collected, withheld or assessed by or on behalf of the Relevant Jurisdiction, as defined in Condition 8.2 below, except as required by applicable law. The Company will, subject to the exceptions and limitations set forth below, pay to a holder of any Note such additional amounts (the "Additional Amounts") as may be necessary in order that every net payment by the Company or a Paying Agent of the principal of and interest on the Note and any other amounts payable on the Note after withholding or deduction for or on account of any present or future tax, duty, assessment or governmental charge imposed or levied by a Relevant Jurisdiction, as defined in Condition 8.2 below, will not be less than the amount provided for in the Note to be then due and payable under the Notes.

However, the obligation to pay Additional Amounts shall not apply:

(a) to the holder or beneficial owner of the Notes 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 or beneficial owner of the Notes fails to do so within 30 days; or

(b) to the holder or beneficial owner of the Notes who is subject to Taxes in respect of the Notes by reason of the existence of any present or former connection between the holder (or between a fiduciary, settlor, beneficiary, member or shareholder of the holder, if the holder is an estate, a trust, a partnership, a limited liability company or a corporation) and a Relevant Jurisdiction, other than merely holding a Note or receiving a payment in respect of a Note, including, without limitation, the holder (or such fiduciary, settlor, beneficiary, member or shareholder) being or having been a citizen or resident of a Relevant Jurisdiction or being or having been engaged in a trade or business or present in a Relevant Jurisdiction or having, or having had, a permanent establishment in a Relevant Jurisdiction; or

(c) to the holder or beneficial owner of the Notes who presents the relevant Notes, where presentation is required, for payment on a date more than 30 days after the date on which payment became due and payable or the date on which payment thereof is duly provided for, whichever occurs later; or

(d) to any estate, inheritance, gift, sales, transfer, capital gains, excise or personal property tax or any similar tax, duty, assessment or governmental charge; or

(e) to any tax, duty, assessment or other governmental charge that is payable otherwise than by withholding or deduction from payments on or in respect of any Note; or

(f) to any tax, duty, assessment or other governmental charge that would not have been imposed but for the failure to comply with certification, information or other reporting requirements concerning the nationality, residence or identity of the holder or beneficial owner of that Note, if compliance is required by statute or by regulation of a Relevant Jurisdiction as a precondition to relief or exemption from the tax, duty, assessment or other governmental charge, and proper notice has been sent to the holder; or

(g) to any tax, duty, assessment or other governmental charge required to be withheld by any Paying Agent from any payment of the principal of, or interest on any Note, to the extent such tax, duty, assessment or other governmental charge results from the presentation (where presentation is required) of any Note for payment and the payment can be made without such withholding or deduction by the presentation of the Note for payment by at least one other Paying Agent; or

(h) to any combination of the items listed above.

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

References in these Conditions to payments in respect of the Notes shall be deemed to refer to any Additional Amounts that may be payable in respect thereof under this Condition 8.1.

The Agent shall in no event be responsible for paying any tax, duty, charges, withholding or other payment referred to in this Condition 8 or for determining whether such amounts are payable or the amount thereof, and shall not be responsible or liable for any failure by the Company or the Noteholders or any other person to pay such tax, duty, charges, withholding or other payment or be responsible to provide any notice or information in relation to the Notes in connection with payment of such tax, duty, charges, withholding or other payment.

8.2 Interpretation

For purposes of these Conditions:

(a) “Relevant Date” in relation to any Notes means (i) the due date for payment in respect thereof or (ii) if the full amount of the moneys payable on such due date has not been received by the Fiscal Agent or the Principal Paying Agent on or prior to such due date, the date on which notice is duly given to the holders of the Notes that such moneys have been so received; and

(b) “Relevant Jurisdiction” means the Republic of Korea or any political subdivision or any authority thereof or therein having power to tax or any other jurisdiction or any political subdivision or any authority thereof or therein having power to tax to which the Company becomes subject in respect of payments made by it of principal and interest on the Notes.

9 PRESCRIPTION

Claims against the Company in respect of the payment of principal and interest on the Notes shall be prescribed unless made within 10 years (in the case of principal) and five years (in the case of interest) from the Relevant Date (as defined in Condition 8).

10 EVENTS OF DEFAULT

10.1 Events of Default

The holder of any Note may give written notice addressed to the Company and delivered to the Company with a copy to the Fiscal Agent that the Note is, and it shall accordingly forthwith become,

immediately due and repayable at its principal amount, together with interest accrued to the date of repayment, if any of the following events (an "Event of Default") shall have occurred and be continuing:

(a) the Company fails to pay the principal or interest, if any, on, any of the Notes, and in the case of principal, the failure continues for a period of seven days and in the case of interest, the failure continues for a period of 30 days; or

(b) the Company fails to perform or observe any of its other obligations under these Conditions or in the Fiscal Agency Agreement and the failure continues for a period of 60 days following the service by any Noteholder on the Company of a notice requiring the same to be remedied; or

(c) if (i) any Indebtedness for Borrowed Money (as defined below) of the Company becomes due and repayable prematurely by reason of an event of default (however described); (ii) the Company fails to make any payment in respect of any Indebtedness for Borrowed Money on the due date for payment; (iii) any security given by the Company for any Indebtedness for Borrowed Money becomes enforceable or proceedings are commenced to enforce any security; or (iv) default is made by the Company in making any payment due under any guarantee and/or indemnity given by it in relation to any Indebtedness for Borrowed Money of any other person; *provided, that* no event described in this Condition 10.1(c) shall constitute an Event of Default unless the relevant amount of Indebtedness for Borrowed Money or other relative liability due and unpaid, either alone or when aggregated (without duplication) with other amounts of Indebtedness for Borrowed Money and/or other liabilities due and unpaid relative to all (if any) other events specified in (i) to (iv) above which have occurred and are continuing, amounts to at least US$30,000,000 (or its equivalent in any other currency); or

(d) if any order is made by any competent court or resolution is passed for the winding up or dissolution of the Company; or

(e) the Company ceases or threatens to cease to carry on the whole or a substantial part of its business save for the purposes of, or pursuant to and followed by, a consolidation, amalgamation, merger or reorganization permitted by Condition 3.2; or

(f) if (i) proceedings are initiated against the Company under any applicable liquidation, insolvency, composition, reorganization or other similar laws or an application is made (or documents filed with a court) for the appointment of an administrative or other receiver, manager, administrator or other similar official, or an administrative or other receiver, manager, administrator or other similar official is appointed, in relation to the Company or, as the case may be, in relation to the whole or any part of its undertaking or assets or an encumbrancer takes possession of the whole or any part of its undertaking or assets, or a distress, execution, attachment, sequestration or other process is levied, enforced upon, sued out or put in force against the whole or any part of its undertaking or assets and (ii) in any such case (other than the appointment of an administrator) unless initiated by the relevant company, is not discharged within 60 days; or

(g) if the Company (or any of its respective directors or shareholders) initiates or consents to juridical proceedings relating to itself under any applicable liquidation, insolvency, composition, reorganization or other similar laws (including the obtaining of a moratorium) or makes a conveyance or assignment for the benefit of, or enters into any composition or other arrangement with, its creditors generally (or any class of its creditors) or any meeting is convened to consider a proposal for an arrangement or composition with its creditors generally (or any class of its creditors); or

(h) any event occurs which under the laws of the Republic of Korea has an analogous effect to any of the events referred to in (a) through (g) above.

10.2 Interpretation

For the purposes of these Conditions:

"Indebtedness for Borrowed Money" means any indebtedness (whether being principal, premium, interest or other amounts) for or in respect of any notes, bonds, debentures, debenture stock, loan stock or other securities or any borrowed money or any liability under or in respect of any acceptance or acceptance credit.

11 REPLACEMENT OF CERTIFICATES

If any Certificated Note is lost, stolen, mutilated, defaced or destroyed it may be replaced at the specified office of the Registrar or such Transfer Agent upon payment by the claimant of the expenses incurred in connection with such replacement and on such terms as to evidence, security, indemnity, prefunding and otherwise as the Company, Registrar or Transfer Agent may require. Mutilated or defaced Certificated Note must be surrendered before replacements will be issued.

12 NOTICES

All notices to holders of the Notes shall be validly given if mailed to them at their respective addresses in the record of holders of the Notes maintained by the Registrar and deemed to have been given on the fifth weekday (being a day other than a Saturday or a Sunday) after the date of mailing and by the participants, or published in a leading newspaper having general circulation in Asia (which is expected to be the *Asian Wall Street Journal*). Notwithstanding the foregoing, so long as the Notes are represented by the Global Note and the Global Note is held on behalf of Euroclear and Clearstream, notice to Noteholders may be given by delivery of the relevant notice to Euroclear and Clearstream, for communication by them to entitled accountholders in substitution for notification as required by the foregoing sentence. The Company shall also ensure that notices are duly given or published in a manner which complies with the rules and regulations of any stock exchange on which the Notes are for the time being listed. Any such notice shall be deemed to have been given on the seventh day after being so mailed or on the date of such publication.

13 MEETINGS OF NOTEHOLDERS, MODIFICATION AND WAIVER

13.1 Meetings of Noteholders

The Fiscal Agency Agreement contains provisions for convening meetings of the Noteholders to consider any matter affecting their interests, including the modification by Extraordinary Resolution (as defined below) of any of these Conditions or any of the provisions of the Fiscal Agency Agreement. Such a meeting may be convened by Noteholders holding not less than 10% of the principal amount of the Notes then outstanding. The quorum at any meeting for passing an Extraordinary Resolution will be one or more persons present holding or representing more than 50% of the principal amount of the Notes then outstanding, or at any adjourned meeting, one or more persons present holding or representing more than 25% of the principal amount of the Notes then outstanding; *provided, however*, that no such meeting shall consider the modification, amendment or waiver to the Fiscal Agency Agreement or any Note to (i) change the stated maturity of the Notes or the scheduled dates for payment of principal of or interest on any 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 such Note; or (iv) reduce the above-stated percentage of the aggregate principal amount of the Notes outstanding or reduce the quorum requirements or the percentage of votes required for the taking of any action, in which case the necessary quorum for passing an Extraordinary Resolution will be one or more persons present holding or representing not less than two-thirds, or at any adjourned meeting not less than one-third, of

the principal amount of the Notes for the time being outstanding. An Extraordinary Resolution passed at any meeting of the Noteholders will be binding on all Noteholders, whether or not they are present at the meeting.

"Extraordinary Resolution" means a resolution duly passed by the lesser of (i) a majority in aggregate principal amount of the Notes then outstanding or (ii) 75% in aggregate principal amount of the Notes represented and voting at the meeting.

13.2 Modification

The Company shall only permit any modification, without the consent of the Noteholders, to these Conditions or any of the provisions of the Fiscal Agency Agreement either (i) for the purpose of curing any ambiguity or of curing, correcting or supplementing any manifest or proven error or any other defective provision contained herein or therein or (ii) in any other manner which is not materially prejudicial to the interests of the Noteholders. Any determination as to prejudice applying to the interests of the Noteholders pursuant to this Condition shall be made by the Company and none of the Agents shall have any responsibility or liability whatsoever with respect to such determination. Any modification shall be binding on the Noteholders and shall be notified by the Company to the Noteholders as soon as practicable thereafter in accordance with Condition 12.

14 FURTHER ISSUANCES

The Company may from time to time, without notice to or the consent of the holders of the Notes, create and issue further debt securities ranking *pari passu* with the Notes in all respects (or in all respects except for the payment of interest accruing prior to the issue date of the additional Notes or except for the first payment of interest following the issue date of the additional Notes). The Company may consolidate such further debt securities with the outstanding Notes to form a single series to the extent permitted under the applicable laws. References in these Conditions to the Notes include (unless the context requires otherwise) any other securities issued pursuant to this Condition 14 and forming a single series with the Notes.

15 GOVERNING LAW AND SUBMISSION TO JURISDICTION

15.1 Governing Law

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

15.2 Jurisdiction

The Company agrees that any legal suit, action or proceeding arising out of or based upon the Fiscal Agency Agreement or the Notes may be instituted in any state or federal court in the Borough of Manhattan, the State and City of New York.

The Company, to the fullest extent it is permissible to do so under applicable law, (a) waives any objection which it may have now or hereafter to the laying of the venue of any such suit, action or proceeding in any such court and (b) irrevocably submits to the non-exclusive jurisdiction of any such court in any suit, action or proceeding.

15.3 Appointment of Process Agent

The Company has agreed to irrevocably appoint SK hynix America Inc., located at 3101 North 1st Street, San Jose, CA 95134, as its authorized agent in the State of New York to receive service of

process in any proceedings in the State of New York based on any of the Notes or the Fiscal Agency Agreement. The Company agrees that in the event of such agent ceasing so to act it will appoint such other person as its agent for that purpose.

16 Currency Indemnity

The Company's obligations under the Notes to make all payments in U.S. dollars will not be satisfied by any payment, recovery or any other realization of proceeds in any currency other than the U.S. dollar. If pursuant to any such judgment, conversion shall be made on a date (the "Substitute Date") other than the date of entry of judgment (the "Judgment Date") and there shall occur a change between the market exchange rate for the U.S. dollar as in effect on the Substitute Date and the market exchange rate as in effect on the Judgment Date, the Company agrees to pay such additional amounts (if any) in U.S. dollars as may be necessary to ensure that the amount paid is equal to the amount in such other currency or currency unit which, when converted at the market exchange rate as in effect on the Judgment Date, is the amount due under any Notes. To the extent permitted by applicable law, any amount due from the Company under this Condition shall be due as a separate debt and is not to be affected by or merged into any judgment being obtained for any other sums due in respect of any Notes. In no event, however, shall the Company be required to pay more in U.S. dollars due under the Notes at the market exchange rate as in effect on the Judgment Date than the amount of U.S. dollars stated to be due under the Notes so that in any event the Company's obligations under the Notes will be effectively maintained as obligations in U.S. dollars and the Company shall be entitled to withhold (or be reimbursed for, as the case may be) any excess of the amount actually realized upon any such conversion on the Substitute Date over the amount due on the Judgment Date.

THE GLOBAL NOTE

Capitalized terms used in this section and not otherwise defined shall have the meanings given to them in "Terms and Conditions of the Notes."

The Notes will initially be represented by the Global Note. The Global Note will be deposited with and registered in the name of a nominee of the Common Depositary, and Euroclear and Clearstream will credit their respective account holders with the respective principal amounts of the individual interests represented by such Global Note. Such accounts will be designated initially by or on behalf of the representative of the Initial Purchasers. Ownership of beneficial interests in the Global Note will be limited to persons who have accounts with Euroclear or Clearstream or persons who hold interests through such account holders. Ownership of beneficial interests in the Global Note will be shown on, and the transfer of that ownership will be effected only through, the records maintained by Euroclear and Clearstream (with respect to interests of their respective account holders) and the records of such account holders (with respect to interests of persons other than such account holders).

Each Global Note (and any Notes issued in exchange therefor) will be subject to certain restrictions on transfer set forth therein and described under "Subscription and Sale." Except in the limited circumstances described in the terms and conditions of the Notes, owners of beneficial interests in the Global Note will not be entitled to receive physical delivery of definitive certificates representing their Notes.

Payments in respect of the Notes represented by the Global Note will be made to the Common Depositary or its nominee as the registered owner thereof. None of the Company, the Fiscal Agent, the Common Depositary, the Registrar, any Paying Agent, any Transfer Agent or any other Agent will have any responsibility or liability for the accuracy of any of the records relating to, or payments made on account of, beneficial interests in the Global Note or for any notice permitted or required to be given to persons with beneficial interests in the Global Note or any consent given or actions taken by such persons. The Company expects that the Common Depositary, upon receipt of any payment in respect of any Notes represented by the Global Note held by it or its nominee, will promptly credit the accounts of the participants of Euroclear and Clearstream with payments proportionate to their respective interests in the principal amount of the Notes represented by the Global Note as shown on its records.

Transfers of book-entry interests in the Notes will be effected through the records of Euroclear and Clearstream and their respective participants in accordance with the rules and procedures of Euroclear and Clearstream and their respective direct and indirect participants.

Although Euroclear and Clearstream have agreed to the foregoing procedures in order to facilitate transfers of interests in the Global Note among participants and account holders of Euroclear and Clearstream, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued at any time. None of the Company, the Fiscal Agent, the Common Depositary, the Registrar, any Paying Agent, any Transfer Agent or any other Agent will have any responsibility for the performance by Euroclear, Clearstream or their respective participants, indirect participants or account holders, of their respective obligations under the rules and procedures governing their operations.

Euroclear and Clearstream each holds the Notes for participating organizations and facilitates the clearance and settlement of Note transactions between its respective participants through electronic book-entry changes in accounts of such participants. Euroclear and Clearstream provide to their respective participants, among other things, services for safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Participants of Euroclear and Clearstream are financial institutions throughout the world, including underwriters, securities brokers and dealers, banks, trust companies, clearing corporations and certain other

organizations. Indirect access to Euroclear and Clearstream is also available to others, such as banks, brokers, dealers and trust companies which clear through or maintain a custodial relationship with a participant of Euroclear or Clearstream, either directly or indirectly.

TAXATION

Korean Taxation

The information provided below does not purport to be a complete summary of Korean tax law and practice currently applicable. Prospective investors who are in any doubt as to their tax position should consult with their own professional advisors.

The taxation of non-resident individuals and non-Korean 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 resident country of the recipient of the income. The relevant tax treaties are discussed below.

In addition, in order to obtain the benefit of a reduced rate available under applicable tax treaties, a Non-Resident holder 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 3 years thereafter), together with a certificate of the Non-Resident holder's tax residence issued by a competent authority of the Non-Resident holder's 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 return if the submission is made 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.

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 other 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 or (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 to allow offsetting of 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 on 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 such 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 subjects the purchaser or such withholding agent to penalties under Korean tax laws.

In order to obtain the benefit of a tax treaty exemption, a Non-Resident seller must submit to the purchaser or the withholding agent prior to or at the time of sale, such evidence of tax residence of the seller as the Korean tax authorities may require in support of the claim for treaty protection. Such evidence normally consists of a certificate from the relevant tax authorities confirming the seller's residence in a relevant jurisdiction. In the absence of sufficient proof, the payer or the Company must withhold taxes in accordance with applicable law as discussed above.

Furthermore, for a Non-Resident to obtain the benefit of a tax exemption on certain Korean source income (e.g., interest payments and capital gains) under an applicable tax treaty, Korean tax law requires such Non-Resident (or its agents) to submit to the payer of such Korean source income an application for tax exemption under a tax treaty along with a certificate of tax residency of such Non-Resident issued by a competent authority of the Non-Resident's country of tax residence, subject to certain exceptions. The payer of such Korean source income, in turn, is required to submit such application to the relevant district tax office by the ninth day of the month following the date of the first payment of such income. Subject to certain exceptions, where the relevant income is paid to an overseas investment vehicle, the overseas investment vehicle must submit a report of overseas investment vehicle and a schedule of beneficial owners.

Inheritance 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 that passes on death (irrespective of the domicile 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% based on the value of the relevant property. 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. Prospective purchasers should consult their personal tax advisors regarding the consequences of the imposition of the Korean inheritance or gift tax.

Stamp Duty and Securities Transaction Tax

No stamp, issue or registration duties will be payable in Korea by the holders of the Notes 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 the Company. 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 10 and 16.5% (including local income tax), and the tax on capital gains is often eliminated.

Each holder of the Notes should inquire whether such holder 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 the Company a certificate as to his tax residence. In the absence of sufficient proof, the payer or the Company must withhold taxes in accordance with the above discussion.

Withholding and Gross Up

As mentioned above, interest on the Notes paid to Non-Residents without a permanent establishment in Korea is exempt from any withholding or deduction on account of income tax or corporation tax pursuant to STTCL if the Notes are deemed to be issued outside Korea under the STTCL. However, in the event that the payer or the Company is 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 — Taxation") the Company has agreed to pay (subject to the customary exceptions as set out in "Terms and Conditions of the Notes — Taxation") 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.

Proposed Financial Transaction Tax ("FTT")

The European Commission has published a proposal (the "Commission's Proposal") for a Directive for a common FTT in Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia (the "participating Member States"). However, Estonia has since stated that it will not participate.

The Commission's Proposal has a broad scope and could, if introduced in its current form, apply to certain dealings in the Notes in certain circumstances.

Under the Commission's Proposal, the FTT could apply in certain circumstances to persons both within and outside of the participating Member States. Generally, it would apply to certain dealings in the Notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, "established" in a participating Member State in a broad range of circumstances, including (a) by transacting with a person established in a participating Member State or (b) where the financial instrument which is subject to the dealings is issued in a participating Member State. However, the FTT proposal remains subject to negotiation between the participating Member States and the legality of the proposal is uncertain. It may therefore be altered prior to any implementation, the timing of which remains unclear.

Additional EU Member States may decide to participate and/or certain of the participating Member States may decide to withdraw.

Prospective holders of the Notes are advised to seek their own professional advice in relation to the FTT.

SUBSCRIPTION AND SALE

BNP Paribas, Citigroup Global Markets Limited, and Credit Suisse (Hong Kong) Limited (the "Initial Purchasers") have, pursuant to a Purchase Agreement (the "Purchase Agreement") dated September 10, 2019, agreed to purchase the Notes subject to certain conditions contained therein.

The Company has agreed to indemnify the Initial Purchasers against certain liabilities (including liabilities under the Securities Act) incurred in connection with the issue and sale of the Notes. The Purchase Agreement may be terminated in certain circumstances prior to payment of the issue price to the Company.

The initial issue price is set forth on the cover of this Offering Circular. After the Notes are released for sale, the Initial Purchasers may change the issue price and other selling terms. The offering of the Notes by the Initial Purchasers is subject to receipt and acceptance and subject to the Initial Purchasers' right to reject any order in whole or in part.

The Initial Purchasers and certain of their respective affiliates have, from time to time, performed, and may in the future perform, certain investment banking, commercial banking and advisory services for the Company or its affiliates for which they have received or will receive customary fees and expenses.

The Initial Purchasers and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. In the ordinary course of their various business activities, the Initial Purchasers and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investments and securities activities may involve securities and instruments of the Company.

The Initial Purchasers or their affiliates may subscribe for the Notes for their own account and enter into transactions, including credit derivatives, such as asset swaps, repackaging and credit default swaps relating to the Notes or other securities of the Company or its subsidiaries or associates at the same time as the offer and sale of the Notes or in secondary market transactions. Such transactions would be carried out as bilateral trades with selected counterparties and separately from any existing sale or resale of the Notes to which this Offering Circular relates (notwithstanding that such selected counterparties may also be subscribers of the Notes).

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

Selling Restrictions

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. In addition, until 40 days after the commencement of the offering of the Notes, 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.

European Economic Area

In relation to each Member State of the European Economic Area, each Initial Purchaser has represented and agreed that it has not made and will not make an offer of Notes which are the subject of the offering contemplated by this Offering Circular to the public in that Member State other than:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the relevant dealer or dealers nominated by the Company for any such offer; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of Notes shall require the Company or any Initial Purchaser to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer of notes to the public" in relation to any Notes in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

United Kingdom

Each Initial Purchaser has 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 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 the Company; 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.

Switzerland

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 ("SIX") or on any other exchange or regulated trading facility in Switzerland. This Offering Circular has been prepared without regard to the disclosure standards for issuance prospectuses under article 652a or article 1156 of the Swiss Code of Obligations, or the disclosure standards for listing prospectuses under article 27 et seq. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland, or the rules related to prospectuses under the Swiss Federal Act on Collective Investment Schemes ("CISA"). Neither this Offering Circular nor any other offering or marketing material relating to the Notes or the offering 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, the Company or the Notes have been or will be filed with or approved by any Swiss regulatory authority. In particular, this Offering Circular will not be filed with, and the offer of Notes will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA ("FINMA"). Acquirers of the Notes will not benefit from protection or supervision by FINMA.

Hong Kong

Each Initial Purchaser has represented and agreed that:

(i) it has not offered or sold and will not offer or sell in Hong Kong, by means of any document, any Notes other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the "SFO") and any rules made under the SFO; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the "C(WUMP)O") or which do not constitute an offer to the public within the meaning of the C(WUMP)O; and

(ii) 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.

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.

Singapore

This Offering Circular has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under the Securities and Futures Act, Chapter 289 of Singapore (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 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:

(i) 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)(i)(B) of the SFA;

(ii) where no consideration is or will be given for the transfer;

(iii) where the transfer is by operation of law;

(iv) as specified in Section 276(7) of the SFA; or

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

Notification under Section 309B(1)(c) of the SFA — 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).

Korea

Each Initial Purchaser severally but not jointly has represented, warranted and agreed that the Notes have not been and will not be registered with the Financial Services Commission of Korea (the "FSC") under the Financial Investment Services and Capital Markets Act of Korea (the "FSCMA"), as amended, and 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 Korean resident (as such term is defined in the Foreign Exchange Transaction Act of Korea and the Enforcement Decree thereof) at the time of issuance of the Notes, except (i) if Article 2-2-2, Paragraph 2, Item 3 of the Regulation on the Issuance of Securities and Public Disclosure, etc. of Korea is applicable, the Notes may be offered, sold or delivered to Korean Qualified Institutional Buyers as specified in Article 2-2, Paragraph 2, Item 4 of the above-mentioned regulation, provided that at least 80% of the aggregate principal amount of the Notes shall be allocated to non-residents of Korea (as such term is defined in the Foreign Exchange Transaction Act of Korea and the Enforcement Decree thereof) (which applies only to the Notes acquired from the Issuer or any Initial Purchaser at the time of issuance of the Notes), and the other requirements as set forth in Article 2-2-2, Paragraph 2, Item 3 referred to above are satisfied, or (ii) as otherwise permitted by applicable Korean laws and regulations. Each Initial Purchaser severally but not jointly has undertaken to ensure that any securities dealer to which it sells 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.

Transfer Restrictions

Because of the following restrictions, purchasers are advised to consult with legal counsel prior to making any offer, resale, pledge or other transfers of the Notes.

Transfer Restrictions under Korean Law

Each purchaser of the Notes, by accepting delivery of this Offering Circular, will be deemed to have represented, warranted and agreed as follows:

(a) The Notes have not been and will not be registered with the FSC under the FSCMA, as amended. Accordingly, the Notes may not be offered, sold, delivered or transferred, directly or indirectly, in Korea or to, or for the account or benefit of, any Korean resident (as such term is defined in the Foreign Exchange Transaction Act of Korea and the Enforcement Decree thereof) for a period of one year from the date of issuance of the Notes, except (i) in the case where, pursuant to Article 2-2-2, Paragraph 2, Item 3 of the Regulation on the Issuance of Securities and Public Disclosure, etc. of Korea, if the Notes are issued as straight bonds other than equity-linked bonds, such as convertible bonds, bonds with warrants and exchangeable bonds, the Notes may be offered, sold, delivered or transferred to, between or among Korean Qualified Institutional Buyers as specified in Article 2-2, Paragraph 2, Item 4 of the above-mentioned regulation, provided that all of the following requirements are satisfied: (1) the Notes shall be issued in a currency other than Won and the principal and interest thereof shall be paid in a currency other than Won, (2) at least 80% of the aggregate principal amount of the Notes shall be allocated to non-residents of Korea (as such term is defined in the Foreign Exchange Transaction Act of Korea and the Enforcement Decree thereof) (which applies only to the Notes acquired from the Issuer or any Initial Purchaser at the time of issuance of the Notes), (3) the Notes shall be those listed on a major overseas securities market specified by the governor of the Financial Supervisory Service of Korea, those registered with or reported to a foreign financial investment supervisory agency of the country in which the above securities market is established, or those for which any other procedure that may be deemed a public offering is completed, (4) measures shall be taken to state the condition that the Notes shall not be transferred to any Korean resident other than Korean Qualified Institutional Buyers at the time of issuance or within one year from the date of issuance of the Notes on the face of such Notes (limited to the case where any physical instrument is issued), the purchase agreement and offering documents and (5) the Issuer and the manager(s) (limited to the case where any manager is appointed) shall take measures under foregoing items (1) through (4) and the Issuer and the managers shall severally or jointly preserve evidential documents in relation thereto, or (ii) as otherwise permitted by applicable Korean laws and regulations.

(b) The Notes will bear legends to the effect described in paragraph (d) below under "— Other Transfer Restrictions Applicable to the Notes."

Other Transfer Restrictions Applicable to the Notes

The Notes have not been and will not be registered under the Securities Act. The Notes may not be offered or sold to any person in the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act.

Except in certain limited circumstances, interests in the Notes may only be held through interests in the Global Note. Such interests in the Global Note will be shown on, and transfers thereof will be effected only through, records maintained by Euroclear, Clearstream and their respective direct and indirect participants. See "Terms and Conditions of the Notes" and "The Global Note."

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

(a) The Notes have not been and will not be registered under the Securities Act or with any securities regulatory authority of any state of the United States or any other jurisdiction and are subject to significant restrictions on transfer.

(b) Until forty (40) days after the commencement of offering of the Notes, 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.

(c) Such purchaser will not offer, sell, pledge or otherwise transfer any interest in the Notes except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act.

(d) The Notes will bear legends to the following effect, unless the Company determines otherwise in compliance with applicable law, and such purchaser will observe the restrictions contained therein:

THE NOTES EVIDENCED HEREBY (THE "NOTES") OF SK HYNIX INC. HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED.

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 ANY RESIDENTS 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 ISSUANCE, PUBLIC DISCLOSURE, ETC. OF SECURITIES 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% OF THE AGGREGATE ISSUE AMOUNT OF THE NOTES.

LEGAL MATTERS

Cleary Gottlieb Steen & Hamilton LLP, U.S. counsel to the Company, and Linklaters LLP, U.S. counsel to the Initial Purchasers, will pass upon certain legal matters as to United States law relating to the Notes. Bae, Kim & Lee LLC, the Company's Korean counsel, will pass upon certain matters as to Korean law for the Company. Cleary Gottlieb Steen & Hamilton LLP and Linklaters LLP may rely as to all matters of Korean law on Bae, Kim & Lee LLC. Bae, Kim & Lee LLC may rely on Cleary Gottlieb Steen & Hamilton LLP as to all matters of U.S. law.

INDEPENDENT AUDITORS

The consolidated financial statements of the Company as of and for the years ended December 31, 2016, 2017 and 2018 included elsewhere in this Offering Circular have been audited by KPMG Samjong Accounting Corp., independent auditors, as stated in their reports appearing elsewhere in this Offering Circular.

With respect to the unaudited condensed consolidated interim financial statements of the Company as of June 30, 2019 and for the three- and six-month periods ended June 30, 2018 and 2019 included elsewhere in this Offering Circular, KPMG Samjong Accounting Corp. have reported that they applied limited procedures in accordance with professional standards for a review of such information. However, their separate report appearing elsewhere in this Offering Circular 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 separate report on such information should be restricted in light of the limited nature of the review procedures applied.

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Independent Auditors' Review Report

The Board of Directors and Shareholders
SK hynix, Inc.:

Reviewed financial statements
We have reviewed the accompanying condensed consolidated interim financial statements of SK hynix, Inc. and its subsidiaries (the "Group") which comprise the condensed consolidated statement of financial position as of June 30, 2019, the condensed consolidated statements of comprehensive income for the three and six-month periods ended June 30, 2019 and 2018, and changes in equity and cash flows for the six-month periods ended June 30, 2019 and 2018 and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's responsibility
Management is responsible for the preparation and fair presentation of these condensed consolidated interim financial statements in accordance with Korean International Financial Reporting Standards ("K-IFRS") No.1034 *'Interim Financial Reporting'*, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' review responsibility
Our responsibility is to issue a report on these condensed consolidated interim financial statements based on our reviews.

We conducted our reviews in accordance with the Review Standards for Quarterly and Semiannual Financial Statements established by the Securities and Futures Commission of the Republic of Korea. A review of interim financial statements 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 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 reviews, nothing has come to our attention that causes us to believe that the accompanying condensed consolidated interim financial statements referred to above are not prepared fairly, in all material respects, in accordance with K-IFRS No.1034 *'Interim Financial Reporting'*.

Other matters
The consolidated statement of financial position of the Group as of December 31, 2018, and the related consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, which are not accompanying this report, were audited by us in accordance with Korean Standards on Auditing and our report thereon, dated February 25, 2019, expressed an unqualified opinion. The accompanying condensed consolidated statement of financial position of the Group as of December 31, 2018, presented for comparative purposes, is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

The procedures and practices utilized in the Republic of Korea to review such condensed consolidated interim financial statements may differ from those generally accepted and applied in other countries.

/s/ KPMG Samjong Accounting Corp.

KPMG Samjong Accounting Corp.
Seoul, Korea
August 12, 2019

This report is effective as of August 12, 2019, the review report date. Certain subsequent events or circumstances, which may occur between the review report date and the time of reading this report, could have a material impact on the accompanying condensed consolidated interim financial statements and notes thereto. Accordingly, the readers of the review report should understand that the above review report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

SK HYNIX, INC. and Subsidiaries

Condensed Consolidated Statements of Financial Position

As of June 30, 2019 and December 31, 2018

(Unaudited)

(In millions of won)

	Note		2019	2018
Assets				
Current assets				
Cash and cash equivalents	*5,6*	₩	1,128,775	2,349,319
Short-term financial instruments	*5,6,7*		410,850	523,579
Short-term investment assets	*5,6*		1,570,090	5,496,452
Trade receivables, net	*5,6,8,32*		4,802,736	6,319,994
Loans and other receivables, net	*5,6,8,32*		21,744	18,392
Inventories, net	*9*		5,588,705	4,422,733
Current tax assets			2,516	22,252
Other current assets	*10,32,33*		717,334	741,425
			14,242,750	19,894,146
Non-current assets				
Investments in associates and joint ventures	*11*		702,669	562,194
Long-term investment assets	*5,6,12*		4,618,125	4,325,550
Loans and other receivables, net	*5,6,8,32*		101,020	68,514
Other financial assets	*5,6,7*		937	310
Property, plant and equipment, net	*13,33*		38,445,358	34,952,617
Right-of-use assets	*3,14*		1,100,430	-
Intangible assets, net	*15*		2,573,593	2,678,770
Investment property, net	*16*		1,369	1,400
Deferred tax assets			624,270	544,016
Employee benefit assets, net	*20*		-	5,164
Other non-current assets	*10,32,33*		621,743	625,654
			48,789,514	43,764,189
Total assets		₩	63,032,264	63,658,335

See accompanying notes to the condensed consolidated interim financial statements.

SK HYNIX, INC. and Subsidiaries

Condensed Consolidated Statements of Financial Position, Continued

As of June 30, 2019 and December 31, 2018

(Unaudited)

(In millions of won)

	Note		2019	2018
Liabilities				
Current liabilities				
Trade payables	*5,6,32*	₩	1,036,169	1,096,380
Other payables	*5,6,24,32*		2,209,580	3,681,933
Other non-trade payables	*5,6*		1,221,314	1,879,520
Borrowings	*5,6,17,33*		2,078,321	1,614,303
Provisions	*19*		40,972	56,208
Current tax liabilities			569,746	4,555,670
Lease liabilities	*3,5,6,14*		210,425	-
Other current liabilities	*18*		146,244	147,838
			7,512,771	13,031,852
Non-current liabilities				
Other non-trade payables	*5,6*		18,130	15,231
Borrowings	*5,6,17,33*		6,668,898	3,667,634
Defined benefit liabilities, net	*20*		122,504	5,387
Deferred tax liabilities			5,831	6,597
Lease liabilities	*3,5,6,14*		910,900	-
Other non-current liabilities	*18,33*		82,443	79,303
			7,808,706	3,774,152
Total liabilities			15,321,477	16,806,004
Equity				
Equity attributable to owners of the Parent Company				
Capital stock	*22*		3,657,652	3,657,652
Capital surplus	*22*		4,143,736	4,143,736
Other equity	*22,35*		(2,505,663)	(2,506,451)
Accumulated other comprehensive loss	*23*		(230,062)	(482,819)
Retained earnings	*24*		42,634,568	42,033,601
Total equity attributable to owners of the Parent Company			47,700,231	46,845,719
Non-controlling interests			10,556	6,612
Total equity			47,710,787	46,852,331
Total liabilities and equity		₩	63,032,264	63,658,335

See accompanying notes to the condensed consolidated interim financial statements.

SK HYNIX, INC. and Subsidiaries

Condensed Consolidated Statements of Comprehensive Income

For the three and six-month periods ended June 30, 2019 and 2018

(Unaudited)

(In millions of won, except per share information)

	Note	2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
Revenue	*4,25,32*	₩ 6,452,201	13,224,856	10,370,507	19,090,197
Cost of sales	*27,32*	4,435,389	8,527,844	3,762,243	7,145,457
Gross profit		2,016,812	4,697,012	6,608,264	11,944,740
Selling and administrative expense	*26,27,32*	1,379,182	2,692,892	1,034,346	2,003,485
Operating profit		637,630	2,004,120	5,573,918	9,941,255
Finance income	*28*	530,061	888,407	763,220	1,003,355
Finance expenses	*28*	476,798	724,653	364,340	677,618
Share of profit of equity-accounted investees	*11*	5,627	10,053	3,946	8,472
Other income	*29,32*	24,692	49,382	10,168	17,234
Other expenses	*29,32*	45,198	71,748	83,437	98,414
Profit before income tax		676,014	2,155,561	5,903,475	10,194,284
Income tax expense	*30*	138,989	516,406	1,574,932	2,744,413
Profit for the period		537,025	1,639,155	4,328,543	7,449,871
Other comprehensive income (loss)					
Item that will never be reclassified to profit or loss:					
Remeasurements of defined benefit liability, net of tax	*20*	(5,401)	(11,312)	(7,055)	(14,095)
Items that are or may be reclassified to profit or loss:					
Foreign operations – foreign currency translation differences, net of tax	*23*	(1,323)	224,221	62,280	212,524
Equity-accounted investees – share of other comprehensive income, net of tax	*11,23*	11,291	28,889	15,129	13,890
Other comprehensive income for the period, net of tax		4,567	241,798	70,354	212,319
Total comprehensive income for the period		₩ 541,592	1,880,953	4,398,897	7,662,190

See accompanying notes to the condensed consolidated interim financial statements.

SK HYNIX, INC. and Subsidiaries

Condensed Consolidated Statements of Comprehensive Income, Continued

For the three and six-month periods ended June 30, 2019 and 2018

(Unaudited)

(In millions of won, except per share information)

	Note	2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
Profit (loss) attributable to:					
Owners of the Parent Company		₩ 535,529	1,638,282	4,329,947	7,450,200
Non-controlling interests		1,496	873	(1,404)	(329)
Total comprehensive income (loss) attributable to:					
Owners of the Parent Company		539,925	1,879,727	4,399,579	7,661,853
Non-controlling interests		1,667	1,226	(682)	337
Earnings per share					
Basic earnings per share (in won)	*31*	783	2,395	6,133	10,553
Diluted earnings per share (in won)	*31*	783	2,395	6,132	10,551

See accompanying notes to the condensed consolidated interim financial statements.

SK HYNIX, INC. and Subsidiaries

Condensed Consolidated Statements of Changes in Equity

For the six-month periods ended June 30, 2019 and 2018

(Unaudited)

(In millions of won)

	Note		Attributable to owners of the Parent Company							
			Capital stock	**Capital surplus**	**Other equity**	**Accumulated other comprehensive loss**	**Retained earnings**	**Total**	**Non-controlling interests**	**Total equity**
Balance at January 1, 2018		₩	3,657,652	4,143,736	(771,100)	(491,529)	27,276,521	33,815,280	5,639	33,820,919
Total comprehensive income:										
Profit for the period			-	-	-	-	7,450,200	7,450,200	(329)	7,449,871
Remeasurements of defined benefit liability, net of tax	*20*		-	-	-	-	(14,095)	(14,095)	-	(14,095)
Other comprehensive income from joint venture and associate, net of tax	*11, 23*		-	-	-	13,890	-	13,890	-	13,890
Foreign currency translation differences for foreign operations, net of tax	*23*		-	-	-	211,858	-	211,858	666	212,524
Total comprehensive income			-	-	-	225,748	7,436,105	7,661,853	337	7,662,190
Transactions with owners of the Parent Company:										
Dividends paid	*24*		-	-	-	-	(706,002)	(706,002)	-	(706,002)
Share-based payment transactions	*35*		-	-	569	-	-	569	-	569
Total transactions with owners of the Parent Company			-	-	569	-	(706,002)	(705,433)	-	(705,433)
Balance at June 30, 2018		₩	3,657,652	4,143,736	(770,531)	(265,781)	34,006,624	40,771,700	5,976	40,777,676

See accompanying notes to the condensed consolidated interim financial statements.

SK HYNIX, INC. and Subsidiaries

Condensed Consolidated Statements of Changes in Equity, Continued

For the six-month periods ended June 30, 2019 and 2018

(Unaudited)

(In millions of won)

	Note	Attributable to owners of the Parent Company							
		Capital stock	Capital surplus	Other equity	Accumulated other comprehensive loss	Retained earnings	Total	Non-controlling interests	Total equity
Balance at January 1, 2019		₩ 3,657,652	4,143,736	(2,506,451)	(482,819)	42,033,601	46,845,719	6,612	46,852,331
Total comprehensive income:									
Profit for the period		-	-	-	-	1,638,282	1,638,282	873	1,639,155
Remeasurements of defined benefit liability, net of tax	*20*	-	-	-	-	(11,312)	(11,312)	-	(11,312)
Other comprehensive income from joint venture and associate, net of tax	*11,23*	-	-	-	28,889	-	28,889	-	28,889
Foreign currency translation differences for foreign operations, net of tax	*23*	-	-	-	223,868	-	223,868	353	224,221
Total comprehensive income		-	-	-	252,757	1,626,970	1,879,727	1,226	1,880,953
Transactions with owners of the Parent Company:									
Increase of Non-controlling interests		-	-	-	-	-	-	2,718	2,718
Dividends paid	*24*	-	-	-	-	(1,026,003)	(1,026,003)	-	(1,026,003)
Share-based payment transactions	*35*	-	-	788	-	-	788	-	788
Total transactions with owners of the Parent Company		-	-	788	-	(1,026,003)	(1,025,215)	2,718	(1,022,497)
Balance at June 30, 2019		₩ 3,657,652	4,143,736	(2,505,663)	(230,062)	42,634,568	47,700,231	10,556	47,710,787

See accompanying notes to the condensed consolidated interim financial statements.

SK HYNIX, INC. and Subsidiaries

Condensed Consolidated Statements of Cash Flows

For the six-month periods ended June 30, 2019 and 2018

(Unaudited)

(In millions of won)

	Note		2019	2018
Cash flows from operating activities				
Cash generated from operating activities	*34*	₩	6,015,232	10,551,029
Interest received			18,235	64,078
Interest paid			(93,743)	(58,974)
Dividends received			14,540	15,099
Income tax paid			(4,551,703)	(2,402,969)
Net cash provided by operating activities			1,402,561	8,168,263
Cash flows from investing activities				
Decrease in short-term financial instruments, net			112,749	3,957,414
Decrease (increase) in short-term investment assets, net			3,972,812	(1,516,642)
Collection of loans and other receivables			6,296	5,743
Increase in loans and other receivables			(38,850)	(25,236)
Proceeds from disposal of long-term investment assets			480	1,058
Acquisition of long-term investment assets			(39,196)	(3,932,470)
Decrease in other financial assets			-	101
Increase in other financial assets			(6)	(17)
Proceeds from disposal of property, plant and equipment			45,319	16,696
Acquisition of property, plant and equipment			(8,497,372)	(8,458,983)
Proceeds from disposal of intangible assets			183	2,532
Acquisition of intangible assets			(329,897)	(414,471)
Receipt of government grants			-	25
Acquisition of investments in associates			(116,001)	(430)
Net cash used in investing activities		₩	(4,883,483)	(10,364,680)

See accompanying notes to the condensed consolidated interim financial statements.

SK HYNIX, INC. and Subsidiaries

Condensed Consolidated Statements of Cash Flows, Continued

For the six-month periods ended June 30, 2019 and 2018

(Unaudited)

(In millions of won)

	Note		2019	2018
Cash flows from financing activities				
Proceeds from borrowings	34	₩	5,864,012	2,063,692
Repayments of borrowings	34		(2,462,930)	(947,475)
Dividends paid	34		(1,026,003)	(706,002)
Repayments of lease liabilities	34		(136,032)	-
Increase of Non-controlling interests			2,718	-
Net cash provided by financing activities			2,241,765	410,215
Effect of movements in exchange rates on cash and cash equivalents			18,613	24,139
Net decrease in cash and cash equivalents			(1,220,544)	(1,762,063)
Cash and cash equivalents at beginning of the period			2,349,319	2,949,991
Cash and cash equivalents at end of the period		₩	1,128,775	1,187,928

See accompanying notes to the condensed consolidated interim financial statements.

1. Reporting Entity

(1) General information about SK hynix, Inc. (the "Parent Company" or the "Company") and its subsidiaries (collectively the "Group") is as follows:

The Parent Company, incorporated in October 15, 1949, is engaged in the manufactures, distribution and sales of semiconductor products and its shares have been listed on the Korea Exchange since 1996. The Parent Company's headquarters is located at 2091 Gyeongchung-daero, Bubal-eup, Icheon-si, Gyeonggi-do, South Korea, and the Group has manufacturing facilities in Icheon-si and Cheongju-si, South Korea, and Wuxi and Chongqing, China.

As of June 30, 2019, the shareholders of the Parent Company are as follows:

Shareholder	Number of shares	Percentage of ownership (%)
SK Telecom Co., Ltd.	146,100,000	20.07
National Pension Service and other investors	537,901,795	73.89
Treasury shares	44,000,570	6.04
	728,002,365	100.00

The Parent Company's common shares and depositary receipts (DRs) are listed on the Stock Market of Korea Exchange and the Luxembourg Stock Exchange.

1. Reporting Entity, Continued

(2) Details of the Group's consolidated subsidiaries as of June 30, 2019 and December 31, 2018 are as follows:

Company	Location	Business	Ownership (%)	
			2019	2018
SK hyeng Inc.	Korea	Construction service	100.00	100.00
SK hystec Inc.	Korea	Business support service	100.00	100.00
Happymore Inc.	Korea	Manufacturing and cleaning cleanroom suits	100.00	100.00
SK hynix system ic Inc.	Korea	Semiconductor manufacturing and sales	100.00	100.00
HAPPYNARAE Co., Ltd.	Korea	Industrial material supply	100.00	100.00
SK hynix America Inc.	U.S.A.	Semiconductor sales	97.74	97.74
SK hynix Deutschland GmbH	Germany	Semiconductor sales	100.00	100.00
SK hynix Asia Pte. Ltd.	Singapore	Semiconductor sales	100.00	100.00
SK hynix Semiconductor Hong Kong Ltd.	Hong Kong	Semiconductor sales	100.00	100.00
SK hynix U.K. Ltd.	U.K.	Semiconductor sales	100.00	100.00
SK hynix Semiconductor Taiwan Inc.	Taiwan	Semiconductor sales	100.00	100.00
SK hynix Japan Inc.	Japan	Semiconductor sales	100.00	100.00
SK hynix Semiconductor (Shanghai) Co., Ltd.	China	Semiconductor sales	100.00	100.00
SK hynix Semiconductor India Private Ltd.[1]	India	Semiconductor sales	100.00	100.00
SK hynix (Wuxi) Semiconductor Sales Ltd.	China	Semiconductor sales	100.00	100.00
SK hynix Semiconductor (China) Ltd.	China	Semiconductor manufacturing	100.00	100.00
SK hynix Semiconductor (Chongqing) Ltd. [2]	China	Semiconductor manufacturing	100.00	100.00
SK hynix Italy S.r.l	Italy	Semiconductor research and development	100.00	100.00
SK hynix memory solutions America Inc.	U.S.A.	Semiconductor research and development	100.00	100.00
SK hynix memory solutions Taiwan Ltd.	Taiwan	Semiconductor research and development	100.00	100.00
SK hynix memory solutions Eastern Europe LLC.	Belarus	Semiconductor research and development	100.00	100.00
SK APTECH Ltd.	Hong Kong	Overseas investment	100.00	100.00
SK hynix Ventures Hong Kong Limited	Hong Kong	Overseas investment	100.00	100.00
SK hynix (Wuxi) Investment Ltd.[3]	China	Overseas investment	100.00	100.00
SK hynix (Wuxi) Industry Development Ltd. [4]	China	Foreign hospital construction	100.00	100.00
SK hynix Happiness (Wuxi) Hospital Management Ltd.[4]	China	Foreign hospital operation	100.00	100.00
SK hynix system ic (Wuxi) Co., Ltd.[5]	China	Overseas Semiconductor manufacturing and sales	100.00	100.00
SK hynix cleaning (Wuxi) Ltd.[4]	China	Building maintenance	100.00	100.00
SUZHOU HAPPYNARAE Co., Ltd.[6]	China	Overseas industrial material supply	100.00	100.00
CHONGQING HAPPYNARAE Co., Ltd.[7]	China	Overseas industrial material supply	100.00	100.00
SkyHigh Memory Limited[8]	Hong Kong	Overseas manufacturing and sales of semiconductor	60.00	-
SK hynix (Wuxi) Education Technology Co.,Ltd.[9]	China	Education	100.00	-
MMT (Money Market Trust)	Korea	Money Market Trust	100.00	100.00

1. Reporting Entity, Continued

(2) Details of the Group's consolidated subsidiaries as of June 30, 2019 and December 31, 2018 are as follows, Continued:

[1] Subsidiary of SK hynix Asia Pte. Ltd.
[2] Subsidiary of SK APTECH Ltd.
[3] Subsidiary of SK hynix Semiconductor (China) Ltd.
[4] Subsidiary of SK hynix (Wuxi) Investment Ltd.
[5] Subsidiary of SK hynix system ic Inc.
[6] Subsidiary of HAPPYNARAE Co., Ltd.
[7] Subsidiary of SUZHOU HAPPYNARAE Co., Ltd.
[8] SkyHigh Memory Limited was established during the six-month period ended June 30, 2019 and is a subsidiary of SK hynix system ic Inc.
[9] SK hynix (Wuxi) Education Technology Co.,Ltd. was established during the six-month period ended June 30, 2019 and is a subsidiary of SK hynix (Wuxi) Investment Ltd.

(3) Changes in the consolidated subsidiaries during the the six-month period ended June 30, 2019 are follows:

	Company	Description
Newly included	SkyHigh Memory Limited	Newly established
Newly included	SK hynix (Wuxi) Education Technology Co., Ltd.	Newly established

(4) Major subsidiaries' summarized separate statements of financial position as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)	2019			2018		
	Assets	Liabilities	Equity	Assets	Liabilities	Equity
SK hynix system ic Inc.	₩ 617,303	131,031	486,272	550,323	92,989	457,334
SK hynix America Inc.	2,250,135	1,924,624	325,511	3,013,637	2,707,732	305,905
SK hynix Deutschland GmbH	58,585	14,292	44,293	99,641	60,244	39,397
SK hynix Asia Pte. Ltd.	497,458	406,688	90,770	933,268	848,990	84,278
SK hynix Semiconductor Hong Kong Ltd.	257,490	110,020	147,470	347,109	204,622	142,487
SK hynix U.K. Ltd.	293,389	266,820	26,569	536,208	518,036	18,172
SK hynix Semiconductor Taiwan Inc.	196,840	176,894	19,946	449,054	427,498	21,556
SK hynix Japan Inc.	446,220	378,020	68,200	837,362	770,819	66,543
SK hynix Semiconductor (Shanghai) Co., Ltd.	118,159	26,013	92,146	1,199,602	1,116,282	83,320
SK hynix (Wuxi) Semiconductor Sales Ltd.	1,741,138	1,647,525	93,613	535,819	492,934	42,885
SK hynix Semiconductor (China) Ltd.	8,450,738	3,717,780	4,732,958	6,390,490	2,158,715	4,231,775
SK hynix Semiconductor (Chongqing) Ltd.	704,184	189,524	514,660	540,284	124,451	415,833

1. Reporting Entity, Continued

(5) Major subsidiaries' summarized separate statements of comprehensive income (loss) for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019			2018		
	Revenue	Profit (loss)	Total comprehensive income (loss)	Revenue	Profit	Total comprehensive income
SK hynix system ic Inc.	₩ 314,533	28,962	28,938	261,047	40,776	40,776
SK hynix America Inc.	3,986,994	8,933	8,933	6,478,311	2,452	2,452
SK hynix Deutschland GmbH	125,366	3,729	3,729	274,095	1,303	1,303
SK hynix Asia Pte. Ltd.	846,356	3,559	3,559	1,644,741	1,973	1,973
SK hynix Semiconductor Hong Kong Ltd.	828,644	(244)	(244)	2,243,478	6,406	6,406
SK hynix U.K. Ltd.	515,719	7,695	7,695	629,196	843	843
SK hynix Semiconductor Taiwan Inc.	676,328	213	213	1,586,328	3,691	3,691
SK hynix Japan Inc.	341,477	(2,227)	(2,227)	584,773	1,341	1,341
SK hynix Semiconductor (Shanghai) Co., Ltd.	123,331	6,124	6,124	3,719,053	35,501	35,501
SK hynix (Wuxi) Semiconductor Sales Ltd.	5,355,115	49,493	49,493	1,436,806	10,363	10,363
SK hynix Semiconductor (China) Ltd.	1,508,963	18,433	18,433	1,204,212	78,631	78,631
SK hynix Semiconductor (Chongqing) Ltd.	195,188	16,983	16,983	200,022	10,006	10,006

(6) There are no significant non-controlling interests to the Group as of June 30, 2019 and December 31, 2018.

2. Basis of Preparation

(1) Statement of compliance
The condensed consolidated interim financial statements have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS"), as prescribed in the Act on External Audits of Stock Companies.

These condensed consolidated interim financial statements were prepared in accordance with K-IFRS No. 1034, *'Interim Financial Reporting'* as part of the period covered by the Group's K-IFRS annual financial statements. Selected explanatory notes are included to explain events and transactions that are significant to an understanding of the changes in financial position and performance of the Group since the last annual consolidated financial statements as of and for the year ended December 31, 2018. These condensed consolidated interim financial statements do not include all of the disclosures required for full annual financial statements.

The Group applied K-IFRS No. 1116 'Leases' from 2019. Changes to significant accounting policies are described in Note 3.

(2) Use of estimates and judgments
(a) Critical judgments, assumptions and estimation uncertainties
The preparation of the condensed consolidated interim financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates if estimates and assumptions that are based on management's best judgment at the end of the interim reporting period differ from the actual environment.

In preparing these condensed consolidated interim financial statements, the significant judgments made by management in applying the Group's accounting policies and the key sources of estimation uncertainty were the same as those that applied to the consolidated financial statements as of and for the year ended December 31, 2018, except for new significant judgements and key sources of estimation uncertainty related to the adoption of K-IFRS No. 1116 *'Leases'*, which are described in Note 3.

(b) Fair value measurement
The Group establishes fair value measurement policies and procedures as its accounting policies and disclosures require fair value measurements for various financial and non-financial assets and liabilities. Such policies and procedures are executed by the valuation department, which is responsible for the review of significant fair value measurements including fair values classified as level 3 in the fair value hierarchy.

The valuation department regularly reviews unobservable significant inputs and valuation adjustments. If third party information such as prices available from an exchange, dealer, broker, industry group, pricing service or regulatory agency is used for fair value measurements, the valuation department reviews whether the valuation based on third party information includes classifications by levels within the fair value hierarchy and meets the requirements for the relevant standards.

The Group uses the best observable inputs in market when measuring fair values of assets or liabilities. Fair values are classified within the fair value hierarchy based on inputs used in valuation methods as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

If various inputs used to measure fair value of assets or liabilities fall into different levels of the fair value hierarchy, the Group classifies the assets and liabilities at the lowest level of inputs among the fair value hierarchy which is significant to the entire measured value. The Group recognizes transfers between levels at the end of the reporting period of which such transfers occurred.

3. Significant Accounting Policies

Except as described below, the accounting policies applied in these condensed consolidated interim financial statements are the same as those applied in the last annual financial statements. The changes in accounting policies are also expected to be reflected in the Group's consolidated financial statements as of and for the year ending December 31, 2019.

The Group initially adopted K-IFRS No. 1116, *'Leases'* from January 1, 2019. A number of other new standards are effective from January 1, 2019, but they do not have a significant impact on the Group's condensed consolidated interim financial statements.

K-IFRS No. 1116 introduced a single, on-balance sheet accounting model for lessees. As a result, the Group, as a lessee, has recognized right-of-use assets representing its rights to use the underlying assets and lease liabilities representing its obligation to make lease payments. Lessor accounting remains similar to previous accounting policies.

The Group recognized the cumulative effect of the initial application of K-IFRS No. 1116 in right-of-use assets and lease liabilities as of January 1, 2019 (the date of initial application). Accordingly, the comparative information presented for 2018 has not been restated - i.e. it is presented, as previously reported, under K-IFRS No. 1017 and related interpretations. Details of changes to the accounting policies are disclosed below.

(1) Definition of a lease
Previously, the Group determined at contract inception whether an arrangement was or contained a lease under K-IFRS Interpretation No. 2104, *'Determining Whether an Arrangement contains a Lease'*. The Group now assesses whether a contract is or contains a lease based on the new definition of a lease. Under K-IFRS No. 1116, a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

At inception or on reassessment of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease and non-lease component on the basis of their relative stand-alone prices. However, for certain agreements in which it is a lessee, the Group has elected not to separate non-lease components and will instead account for the lease and non-lease components as a single lease component.

(2) As a lessee
The Group leases many assets, including production equipment. As a lessee, the Group previously classified leases as operating or finance leases based on its assessment of whether the lease transferred substantially all of the risks and rewards of ownership. Under K-IFRS No. 1116, the Group recognizes right-of-use assets and lease liabilities for most leases on the condensed consolidated statements of financial position.

However, as permitted in K-IFRS No. 1116, the Group has elected not to recognize right-of-use assets and lease liabilities for certain leases of low-value assets and short-term leases. The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

The Group separately presents right-of-use assets that do not meet the definition of investment property in the statement of financial position. The carrying amounts of right-of-use assets are as below.

3. Significant Accounting Policies, Continued

(2) As a lessee, Continued

(In millions of won)

	Properties	Structures	Vehicles	Machinery	Other property, plant and equipment	Total
Balance at January 1, 2019	₩ 26,599	867,864	279,952	10,674	3,215	1,188,304
Balance at June 30, 2019	₩ 32,268	851,833	200,007	14,708	1,614	1,100,430

(i) Significant Accounting Policies
The Group recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost and subsequently measured at cost less any accumulated depreciation and impairment losses, adjusted for certain remeasurement of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. The Group generally uses its incremental borrowing rate as a discount rate.

The lease liability is subsequently increased by the interest expense on the lease liability and decreased by lease payment made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee, or as appropriate, changes in the assessment of whether a purchase or extension option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised.

(ii) Transition
Previously, the Group classified certain lease contacts for equipments and others as operating leases under K-IFRS No. 1017.

At transition, for leases classified as operating leases under K-IFRS No. 1017, lease liabilities were measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate as of January 1, 2019. Right-of-use assets are measured at:

- an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments

The Group used the following practical expedients when applying K-IFRS No. 1116 to leases previously classified as operating leases under K-IFRS No. 1017.

- Excluded initial direct costs from measuring the right-of-use assets at the date of initial application.
- Used hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

The Group leases a number of structures. Certain items were classified as finance leases under K-IFRS No. 1017. For these finance leases, the carrying amount of the right-of-use assets and the lease liability at January 1, 2019 were determined at the carrying amount of the lease asset and lease liability under K-IFRS No. 1017 immediately before that date.

3. Significant Accounting Policies, Continued

(3) As a lessor
The Group leases out its investment property. The Group has classified these leases as operating leases. The accounting policies applicable to the Group as a lessor are not different from those under K-IFRS No. 1017.

The Group is not required to make any adjustments on transition to K-IFRS No. 1116 for leases in which it acts as a lessor. However, the Group has applied K-IFRS No. 1115, '*Revenue from Contracts with Customers*' to allocate consideration in the contract to each lease and non-lease component.

(4) Impacts on financial statements

(i) Impacts on transition
On transition to K-IFRS No. 1116, the Group recognized additional right-of-use assets and lease liabilities. The impact on transition is summarized as follows:

(In millions of won)

		January 1, 2019
Right-of-use assets	₩	1,188,304
Property, plant and equipment		(73,069)
Lease liabilities		1,192,096
Borrowings		(68,158)
Other current liabilities		(8,703)

When measuring lease liabilities for leases that were classified as operating leases, the Group discounted lease payments using its incremental borrowing rate at January 1, 2019. The weighted average incremental borrowing rate is 2.22%.

(In millions of won)

		Amount
Operating lease commitment at January 1, 2019	₩	1,291,372
Discounted using the incremental borrowing rate at January 1, 2019		1,128,364
Finance lease liabilities recognized as of December 31, 2018		68,158
- Recognition exemption for leases of low-value assets		(835)
- Recognition exemption for leases of short-term leases		(3,591)
Lease liabilities recognized at January 1, 2019	₩	1,192,096

(ii) Impacts for the period
As a result of initially applying K-IFRS No. 1116, in relation to the leases that were previously classified as operating leases, the Group recognized ₩1,030,407 million of right-of-use assets (including investment property) and ₩1,057,345 million of lease liabilities as of June 30, 2019.

Also in relation to those leases under K-IFRS No. 1116, the Group has recognized depreciation and interest expense, instead of operating lease expense. During the six-month period ended June 30, 2019, the Group recognized ₩130,101 million of depreciation charges and ₩11,710 million of interest expense from these leases.

4. Geographic and Customer Information

The Group has a single reportable segment that is engaged in the manufacture and sale of semiconductor products. The management of the Group reviews the operation result of the semiconductor business for reporting information used and reviewed when establishing the Group's business strategy.

(1) The Group's non-current assets (excluding financial assets, loans and other receivables, equity-accounted investees and deferred tax assets) information by region based on the location of subsidiaries as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018
Korea	₩	34,555,491	32,768,811
China		7,761,545	5,100,869
Taiwan		8,633	6,309
Asia (other than China and Taiwan)		14,783	1,401
U.S.A.		389,922	376,307
Europe		12,119	9,908
	₩	42,742,493	38,263,605

(2) Revenues from customers A and B that each constitutes more than 10% of the Group's consolidated revenue for the six-month period ended June 30, 2019 amount to ₩2,632,931 million (2018: ₩2,264,477 million) and ₩1,652,731 million (2018: ₩2,393,419 million), respectively.

5. Categories of Financial Instruments

(1) Categories of financial assets as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019		
		Financial assets at fair value through profit or loss	**Financial assets at amortized cost**	**Total**
Cash and cash equivalents	₩	-	1,128,775	1,128,775
Short-term financial instruments		-	410,850	410,850
Short-term investment assets		1,570,090	-	1,570,090
Trade receivables		-	4,802,736	4,802,736
Loans and other receivables		-	122,764	122,764
Other financial assets		-	937	937
Long-term investment assets		4,618,125	-	4,618,125
	₩	6,188,215	6,466,062	12,654,277

(In millions of won)

		2018		
		Financial assets at fair value through profit or loss	**Financial assets at amortized cost**	**Total**
Cash and cash equivalents	₩	-	2,349,319	2,349,319
Short-term financial instruments		-	523,579	523,579
Short-term investment assets		5,496,452	-	5,496,452
Trade receivables		-	6,319,994	6,319,994
Loans and other receivables		-	86,906	86,906
Other financial assets		-	310	310
Long-term investment assets		4,325,550	-	4,325,550
	₩	9,822,002	9,280,108	19,102,110

5. Categories of Financial Instruments, Continued

(2) Categories of financial liabilities as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

	2019		
	Financial liabilities at fair value through profit or loss	**Financial liabilities measured at amortized cost**	**Total**
Trade payables	₩ -	1,036,169	1,036,169
Other payables	2,138	2,207,442	2,209,580
Other non-trade payables[1]	-	1,239,444	1,239,444
Borrowings	-	8,747,219	8,747,219
Lease liabilities	-	1,121,325	1,121,325
	₩ 2,138	14,351,599	14,353,737

(In millions of won)

	2018
	Financial liabilities measured at amortized cost
Trade payables	₩ 1,096,380
Other payables	3,681,933
Other non-trade payables[1]	1,894,751
Borrowings[2]	5,281,937
	₩ 11,955,001

[1] Details of other non-trade payables as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018
Current			
Accrued expenses	₩	1,221,314	1,879,520
Non-current			
Long-term accrued expenses		4,064	1,096
Rent deposit payables		14,066	14,135
		18,130	15,231
	₩	1,239,444	1,894,751

[2] As of December 31, 2018, borrowings include finance lease liabilities amounting to ₩68,157 million in accordance with K-IFRS No. 1017. Meanwhile, as a result of the transition to K-IFRS No. 1116, lease liabilities are presented separately from borrowings in the consolidated statement of financial position as of June 30, 2019.

6. Financial Risk Management

(1) Financial risk management
The Group's activities are exposed to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk. The interim financial statements do not include all the financial risk management policies and disclosures that are required in the annual financial statements. There is no significant change in risk management policies and risk management department for the six-month period ended June 30, 2019.

(a) Market risk

(i) Foreign exchange risk
The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar, Euro and Japanese Yen. Foreign exchange risk arises from future commercial transactions; recognized assets and liabilities in foreign currencies; and net investments in foreign operations.

Monetary foreign currency assets and liabilities as of June 30, 2019 are as follows:

(In millions of won and millions of foreign currencies)

	Assets		Liabilities	
	Foreign currencies	Korean won equivalent	Foreign currencies	Korean won equivalent
USD	7,000	₩ 8,097,397	7,042	₩ 8,145,768
EUR	12	16,055	54	71,612
JPY	655	7,030	151,909	1,630,520

As of June 30, 2019, the impacts from foreign exchange risks on each monetary foreign currency assets and liabilities assuming change in exchange rate by 10% are as follows:

(In millions of won)

	If increased by 10%	If decreased by 10%
USD	₩ (4,837)	4,837
EUR	(5,556)	5,556
JPY	(162,349)	162,349

6. Financial Risk Management, Continued

(1) Financial risk management, Continued

(a) Market risk, Continued

(ii) Interest rate risk
Interest rate risk of the Group is defined as the risk that the interest expenses arising from borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises through floating rate borrowings, and is partially offset by interests received from floating rate financial assets.

As of June 30, 2019, the Group is partially exposed to the risk of fluctuation of net interest expenses arisen from change in interest rates. If interest rates on borrowings had been 100 basis points higher/lower with all other variables held constant, profit before income tax for the next six-month period would have been ₩25,067 million lower/higher, mainly as a result of higher/lower interest expense on floating rate borrowings and interest income on floating rate financial assets.

(iii) Price risk
The Group invests in equity and debt securities resulted from its business needs and the purpose of liquidity management. The Group's equity and debt securities are exposed to price risk as of June 30, 2019.

(b) Credit risk
Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises mainly from operating and investing activities. In order to manage credit risk, the Group periodically evaluates the credit worthiness of each customer or counterparty through the analysis of its financial information, historical transaction records and other factors, and establishes credit limits for each customer or counterparty.

(i) Trade and other receivables
For each new customer, the Group individually analyzes its credit worthiness before standard payment and delivery terms and conditions are offered. In addition, the Group is consistently managing trade and other receivables by reevaluating the customer's credit worthiness and securing collaterals in order to limit its credit risk exposure.

The Group reviews at the end of each reporting period whether trade and other receivables are impaired and maintains credit insurance policies to manage credit risk exposure from oversea customers. The maximum exposure to credit risk as of June 30, 2019 is the carrying amount of trade and other receivables.

(ii) Other financial assets
Credit risk also arises from other financial assets such as cash and cash equivalents; Short-term financial instruments; short-term and long-term investment assets ; and short-term and long-term loans mainly due to the bankruptcy of each counterparty to those financial assets. The maximum exposure to credit risk as of June 30, 2019 is the carrying amount of those financial assets. The Group transacts only with banks and financial institutions with high credit ratings, and accordingly management does not expect any significant loss from non-performance by the counterparties.

6. Financial Risk Management, Continued

(1) Financial risk management, Continued

(c) Liquidity risk
Liquidity risk is defined as the risk that the Group is unable to meet its short-term payment obligations on time due to deterioration of its business performance or inability to access financing. The Group forecasts its cash flow and liquidity status and sets action plans on a regular basis to manage liquidity risk proactively.

The Group invests surplus cash in interest-bearing current accounts, time deposits, demand deposits, choosing instruments with appropriate maturities or sufficient liquidity to provide sufficient head-room as determined by the above-mentioned forecasts.

(2) Capital management
The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends to shareholders, proceeds and repayments of borrowings, issue new shares or sell assets to reduce debt.

The debt-to-equity ratio and net borrowing ratio as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018
Total liabilities (A)	₩	15,321,477	16,806,004
Total equity (B)		47,710,787	46,852,331
Cash and cash equivalents, short-term investment assets and short-term financial instruments (C)		3,109,715	8,369,350
Total borrowings (D)[1]		8,747,219	5,281,937
Debt-to-equity ratio (A/B)		32.11%	35.87%
Net borrowing ratio (D-C)/B[2]		11.82%	-

[1] As of December 31, 2018, borrowings include finance lease liabilities amounting to ₩68,157 million in accordance with K-IFRS No. 1017. Meanwhile, as a result of the transition to K-IFRS No. 1116, lease liabilities are presented separately from borrowings in the consolidated statement of financial position as of June 30, 2019.
[2] Net borrowing ratio as of December 31, 2018 is not presented as the ratio was negative.

6. Financial Risk Management, Continued

(3) Fair value

Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in valuation techniques as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

(a) The following table presents the carrying amounts and fair values of financial instruments by categories, including their levels in the fair value hierarchy, as of June 30, 2019 and December 31, 2018:

(In millions of won)

		2019			
	Carrying amounts	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value					
Short-term investment assets	₩ 1,570,090	-	1,570,090	-	1,570,090
Long-term investment assets	4,618,125	-	-	4,618,125	4,618,125
	6,188,215	-	1,570,090	4,618,125	6,188,215
Financial assets not measured at fair value					
Cash and cash equivalents[1]	1,128,775	-	-	-	-
Short-term financial instruments[1]	410,850	-	-	-	-
Trade receivables[1]	4,802,736	-	-	-	-
Loans and other receivables[1]	122,764	-	-	-	-
Other financial assets[1]	937	-	-	-	-
	6,466,062	-	-	-	-
Financial liabilities measured at fair value					
Other payables	2,138	-	-	2,138	2,138
Financial liabilities not measured at fair value					
Trade payables[1]	1,036,169	-	-	-	-
Other payables[1]	2,207,442	-	-	-	-
Other non-trade payables[1]	1,239,444	-	-	-	-
Borrowings	8,747,219	-	8,794,877	-	8,794,877
Lease liabilities	1,121,325	-	-	-	-
	₩ 14,351,599	-	8,794,877	-	8,794,877

6. Financial Risk Management, Continued

(3) Fair value, Continued

(In millions of won)

		2018				
		Carrying amounts	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value						
Short-term investment assets	₩	5,496,452	-	5,496,452	-	5,496,452
Long-term investment assets		4,325,550	-	-	4,325,550	4,325,550
		9,822,002	-	5,496,452	4,325,550	9,822,002
Financial assets not measured at fair value						
Cash and cash equivalents[1]		2,349,319	-	-	-	-
Short-term financial instruments[1]		523,579	-	-	-	-
Trade receivables[1]		6,319,994	-	-	-	-
Loans and other receivables[1]		86,906	-	-	-	-
Other financial assets[1]		310	-	-	-	-
		9,280,108	-	-	-	-
Financial liabilities not measured at fair value						
Trade payables[1]		1,096,380	-	-	-	-
Other payables[1]		3,681,933	-	-	-	-
Other non-trade payables[1]		1,894,751	-	-	-	-
Borrowings[2]		5,281,937	-	5,300,120	-	5,300,120
	₩	11,955,001	-	5,300,120	-	5,300,120

[1] Do not include fair values of financial assets and liabilities of which fair values have not been measured as carrying amounts are considered to be a reasonable approximation of fair values.
[2] As of December 31, 2018, borrowings include finance lease liabilities in accordance with K-IFRS No.1017.

(b) The valuation techniques used to measure financial instruments with fair value level 2 and fair value level 3 are the same as those applied by the Group in its consolidated financial statements as of and for the year ended December 31, 2018.

(c) There was no transfer between fair value hierarchy levels for the six-month period ended June 30, 2019. The movements in financial assets and financial liabilities classified as level 3 fair value measurements during the six-month period ended June 30, 2019 are as follows:

(In millions of won)

		Beginning Balance	Acquisition	Disposal	Foreign exchange difference	Loss on valuation	Ending Balance
Financial assets							
Long-term investment assets	₩	4,325,550	40,610	(480)	252,467	(22)	4,618,125
Financial liabilities							
Other payables	₩	-	3,208	-	-	(1,070)	2,138

7. Restricted Financial Instruments

Details of restricted financial instruments as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018	Description
Short-term financial instruments	₩	227,500	227,500	Restricted for supporting small businesses
		6,440	6,079	Pledged for consumption tax
		233,940	233,579	
Other financial assets		11	11	Bank overdraft guarantee deposit
		273	265	Others
		284	276	
	₩	234,224	233,855	

8. Trade Receivables and Loans and Other Receivables

(1) Details of loans and other receivables as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018
Current			
Other receivables	₩	12,550	8,465
Accrued income		1,877	3,899
Short-term loans		5,521	4,807
Short-term guarantee and other deposits		1,796	1,221
		21,744	18,392
Non-current			
Long-term other receivables		2	54
Long-term loans		31,766	28,125
Guarantee deposits		69,024	40,117
Others		228	218
		101,020	68,514
	₩	122,764	86,906

(2) Trade receivables and loans and other receivables, net of provision for impairment, as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019		
		Gross amount	**Provision for impairment**	**Carrying amount**
Trade receivables	₩	4,802,785	(49)	4,802,736
Current loans and other receivables		23,025	(1,281)	21,744
Non-current loans and other receivables		102,172	(1,152)	101,020
	₩	4,927,982	(2,482)	4,925,500

(In millions of won)

		2018		
		Gross amount	**Provision for impairment**	**Carrying amount**
Trade receivables	₩	6,320,042	(48)	6,319,994
Current loans and other receivables		19,715	(1,323)	18,392
Non-current loans and other receivables		69,631	(1,117)	68,514
	₩	6,409,388	(2,488)	6,406,900

8. Trade Receivables and Loans and Other Receivables, Continued

(3) Details of provision for impairment
Changes in the provision for impairment of trade receivables for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	48	46
Foreign exchange difference		1	1
Ending balance	₩	49	47

Changes in the provision for impairment of current loans and other receivables for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	1,323	1,327
Reversal		(44)	(2)
Foreign exchange difference		2	2
Ending balance	₩	1,281	1,327

Changes in the provision for impairment of non-current loans and other receivables for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	1,117	1,087
Write-off		-	(985)
Foreign exchange difference		35	-
Ending balance	₩	1,152	102

9. Inventories

Details of inventories as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

	2019		
	Acquisition cost	Inventory valuation allowance	Carrying amount
Merchandise	₩ 2,294	(11)	2,283
Finished goods	2,634,180	(413,289)	2,220,891
Work-in-process	2,568,992	(359,348)	2,209,644
Raw materials	587,139	(8,466)	578,673
Supplies	533,234	(22,142)	511,092
Goods in transit	66,122	-	66,122
	₩ 6,391,961	(803,256)	5,588,705

(In millions of won)

	2018		
	Acquisition cost	Inventory valuation allowance	Carrying amount
Merchandise	₩ 1,648	(14)	1,634
Finished goods	1,532,188	(127,749)	1,404,439
Work-in-process	2,327,178	(208,197)	2,118,981
Raw materials	486,436	(24,894)	461,542
Supplies	433,017	(17,138)	415,879
Goods in transit	20,258	-	20,258
	₩ 4,800,725	(377,992)	4,422,733

10. Other Current and Non-current Assets

Details of other current and non-current assets as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

	2019	2018
Current		
Advance payments	₩ 98,307	113,030
Prepaid expenses	265,255	260,064
Value added tax refundable	315,270	343,821
Contract assets	37,826	24,294
Others	676	216
	717,334	741,425
Non-current		
Long-term advance payments	69,659	96,817
Long-term prepaid expenses	552,084	528,837
	621,743	625,654
	₩ 1,339,077	1,367,079

11. Investments in Associates and Joint Ventures

(1) Details of investments in associates and joint ventures as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

				2019			2018	
Type	**Investee**	**Location**	**Business**	**Owner-ship(%)**	**Net asset value**	**Carrying amount**	**Owner-ship(%)**	**Carrying amount**
Associate	Stratio, Inc. [1]	U.S.A	Development and manufacuring semiconductor	9.12	₩ 77	2,077	9.12	₩ 2,079
	SK China Company Limited [1]	China	Consulting and investment	11.87	212,233	264,584	11.87	246,052
	Gemini Partners Pte. Ltd.	Singapore	Consulting	20.00	2,592	2,592	20.00	2,601
	TCL Fund[1]	China	Investment	11.06	3,561	3,561	11.06	3,464
	SK South East Asia Investment Pte. Ltd.	Singapore	Consulting and investment	20.00	232,239	232,239	20.00	111,810
	Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)	China	Venture Capital	39.06	5,796	5,746	46.30	3,241
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	China	Manufacturing semiconductor parts	45.00	106,074	106,074	45.00	109,708
	Hystars Semiconductor (Wuxi) Co., Ltd.	China	Foundry factory construction	50.10	84,377	85,796	50.10	83,239
					₩ 646,949	702,669		₩ 562,194

[1] The Group is able to exercise significant influence through its right to appoint a director to the board of directors of each investee. Accordingly, the investments in these investees have been classified as associates.

11. Investments in Associates and Joint Ventures, Continued

(2) Changes in investments in associates and joint ventures for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019					
	Beginning balance	Acquisition	Share of profit (loss)	Other equity movement	Dividend	Ending balance
Stratio, Inc.	₩ 2,079	-	(5)	3	-	2,077
SK China Company Limited	246,052	-	2,660	15,872	-	264,584
Gemini Partners Pte. Ltd.	2,601	-	(117)	108	-	2,592
TCL Fund	3,464	-	(7)	113	(9)	3,561
SK South East Asia Investment Pte. Ltd.	111,810	113,470	543	6,416	-	232,239
Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)	3,241	2,531	(82)	56	-	5,746
HITECH Semiconductor (Wuxi) Co., Ltd.	109,708	-	7,182	3,643	(14,459)	106,074
Hystars Semiconductor (Wuxi) Co., Ltd.	83,239	-	(121)	2,678	-	85,796
	₩ 562,194	116,001	10,053	28,889	(14,468)	702,669

(In millions of won)

	2018					
	Beginning balance	Acquisition	Share of profit (loss)	Other equity movement	Dividend	Ending balance
Stratio, Inc.	₩ 2,105	-	(9)	4	-	2,100
SK China Company Limited	244,912	-	1,750	9,045	-	255,707
Gemini Partners Pte. Ltd.	4,003	-	(49)	54	-	4,008
TCL Fund	2,634	430	(7)	94	-	3,151
HITECH Semiconductor (Wuxi) Co., Ltd.	106,210	-	6,787	4,693	(13,120)	104,570
	₩ 359,864	430	8,472	13,890	(13,120)	369,536

11. Investments in Associates and Joint Ventures, Continued

(3) Associates and joint ventures' summarized statements of financial position as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

	2019			
	Current assets	Non-current assets	Current liabilities	Non-current liabilities
Stratio, Inc.	₩ 226	778	163	-
SK China Company Limited	679,083	1,324,288	56,558	158,249
Gemini Partners Pte. Ltd.	5,557	7,476	69	-
TCL Fund	35,525	-	3,302	-
SK South East Asia Investment Pte. Ltd.	614,009	547,272	89	-
Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)	6,348	8,493	-	-
HITECH Semiconductor (Wuxi) Co., Ltd.	268,799	418,560	109,668	341,972
Hystars Semiconductor (Wuxi) Co., Ltd.	175,647	118,536	55,171	70,594

(In millions of won)

	2018			
	Current assets	Non-current assets	Current liabilities	Non-current liabilities
Stratio, Inc.	₩ 403	617	159	-
SK China Company Limited	646,779	1,148,281	65,037	97,633
Gemini Partners Pte. Ltd.	5,357	7,649	-	-
TCL Fund	915	33,596	3,188	-
SK South East Asia Investment Pte. Ltd.	559,050	-	-	-
Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)	6,187	814	-	-
HITECH Semiconductor (Wuxi) Co., Ltd.	211,273	376,266	114,756	228,987
Hystars Semiconductor (Wuxi) Co., Ltd.	145,509	19,295	1,490	-

(4) Associates and a joint ventures' summarized statements of comprehensive income (loss) for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019		2018	
	Revenue	Profit (loss) for the period	Revenue	Profit (loss) for the period
Stratio, Inc.	₩ 31	(52)	31	(100)
SK China Company Limited	71,659	22,414	22,831	14,744
Gemini Partners Pte. Ltd.	-	(583)	-	(245)
TCL Fund	-	(63)	-	(59)
SK South East Asia Investment Pte. Ltd.	3,726	2,714	-	-
Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)	-	(188)	-	-
HITECH Semiconductor (Wuxi) Co., Ltd.	330,640	15,959	150,224	15,083
Hystars Semiconductor (Wuxi) Co., Ltd.	-	(241)	-	-

12. Long-term Investment Assets

Changes in long-term investment assets for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	4,325,550	43,226
Acquisition		40,610	3,932,470
Disposal		(480)	(810)
Foreign exchange difference		252,467	92,615
Valuation		(22)	-
Ending balance	₩	4,618,125	4,067,501

13. Property, Plant and Equipment

(1) Changes in property, plant and equipment for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	34,952,617	24,062,601
Impacts on transition to K-IFRS No. 1116		(73,069)	-
Beginning balance after transition adjustments		34,879,548	24,062,601
Acquisition		7,006,594	7,969,804
Disposal and retirement		(35,058)	(57,125)
Depreciation		(3,567,500)	(2,763,821)
Foreign exchange difference		161,774	99,838
Ending balance	₩	38,445,358	29,311,297

(2) Certain property, plant and equipment are pledged as collaterals for borrowings of the Group as of June 30, 2019 (Note 33-(5)).

14. Leases

(1) Changes in right-of-use assets for the six-month period ended June 30, 2019 are as follows:

(In millions of won)

		2019
Beginning balance	₩	-
Impacts on transition to K-IFRS No. 1116		1,188,304
Beginning balance after transition adjustments		1,188,304
Increase		31,489
Depreciation		(133,147)
Foreign exchange difference		13,784
Ending balance	₩	1,100,430

(2) Changes in lease liabilities for the six-month period ended June 30, 2019 are as follows:

(In millions of won)

		2019
Beginning balance	₩	-
Impacts on transition to K-IFRS No. 1116		1,192,096
Beginning balance after transition adjustments		1,192,096
Increase		31,474
Interest		12,918
Payments		(137,332)
Foreign exchange difference		22,169
Ending balance	₩	1,121,325

15. Intangible Assets

(1) Changes in intangible assets for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	2,678,770	2,247,290
Acquisition		329,897	414,471
Business combination		3,208	-
Disposal and retirement		(2,560)	(5,112)
Amortization		(448,013)	(259,590)
Impairment		(70)	(3,463)
Foreign exchange difference and others		12,361	14,695
Ending balance	₩	2,573,593	2,408,291

(2) Among costs associated with development activities, ₩167,289 million that met capitalization criteria were capitalized as development cost for the six-month period ended June 30, 2019 (2018: ₩261,894 million). In addition, costs associated with research activities and other development expenditures that did not meet the criteria and amounted to ₩1,364,196 million were recognized as expenses for the six-month period ended June 30, 2019 (2018: ₩1,031,360 million).

16. Investment Property

(1) Changes in investment property during the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	1,400	2,468
Depreciation		(31)	(53)
Ending balance	₩	1,369	2,415

(2) The depreciation expense of ₩31 million was charged to cost of sales for the six-month period ended June 30, 2019 (2018: ₩53 million).

(3) Rental income from investment property during the six-month period ended June 30, 2019 was ₩119 million (2018: ₩189 million).

17. Borrowings

Details of borrowings as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018[1]
Current			
Short-term borrowings	₩	1,284,200	585,788
Current portion of long-term borrowings[1]		794,121	578,665
Current portion of debentures		-	449,850
		2,078,321	1,614,303
Non-current			
Long-term borrowings[1]		4,186,016	2,161,566
Debentures		2,482,882	1,506,068
		6,668,898	3,667,634
	₩	8,747,219	5,281,937

[1] As of December 31, 2018, current portion of long-term borrowings and non-current long-term borrowings include finance lease liabilities amounting to ₩10,563 million and ₩57,594 million, respectively, in accordance with K-IFRS No. 1017. Meanwhile, as a result of the transition to K-IFRS No. 1116, the Group presents lease liabilities separately from borrowings in the consolidated statement of financial position as of June 30, 2019.

18. Other Current and Non-current Liabilities

Details of other current and non-current liabilities as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018
Current			
Advance receipts	₩	5,737	8,973
Unearned income		269	186
Withholdings		51,199	49,770
Deposits received		1,021	1,036
Contract liabilities		83,236	80,373
Others		4,782	7,500
		146,244	147,838
Non-current			
Other long-term employee benefits		77,543	74,403
Long-term advance receipts		4,900	4,900
		82,443	79,303
	₩	228,687	227,141

19. Provisions

(1) Changes in provisions for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019				
		Beginning Balance	**Increase**	**Utilization**	**Reversal**	**Ending Balance**
Warranty	₩	3,992	501	(1,124)	-	3,369
Legal claims		5,881	-	(5,881)	-	-
Emission allowances		46,335	-	-	(8,732)	37,603
	₩	56,208	501	(7,005)	(8,732)	40,972

(In millions of won)

		2018				
		Beginning Balance	**Increase**	**Utilization /Transfer**	**Reversal**	**Ending Balance**
Warranty	₩	3,807	1,712	(1,908)	-	3,611
Legal claims		9,460	-	(9,460)	-	-
Emission allowances		37,412	-	-	(10,884)	26,528
	₩	50,679	1,712	(11,368)	(10,884)	30,139

(2) Provisions for warranty
The Group estimates the expected warranty costs based on historical results and records provisions for warranty.

(3) Provisions for legal claims
The Group recognizes provisions for legal claims when the Group has a present legal or constructive obligation as a result of past events and an outflow of resources required to settle the obligation is probable and the amount can be reliably estimated.

(4) Provision for emission allowances
The Group recognizes estimated future payment for the number of emission certificates required to settle the Group's obligation exceeding the actual number of certificates on hand as emission allowances according to the Act on Allocation and Trading of Greenhouse Gas Emission Permits.

20. Defined Benefit Liabilities

(1) Details of defined benefit liabilities as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018
Present value of defined benefit obligations	₩	1,729,633	1,609,055
Fair value of plan assets		(1,607,129)	(1,608,832)
Net defined benefit liabilities	₩	122,504	223
Defined benefit liabilities		122,504	5,387
Employee benefit assets[1]		-	(5,164)

[1] The Parent Company and certain subsidiaries' fair value of plan assets in excess of the present value of defined benefit obligations, presented as employee benefit assets, amounted to ₩5,164 million as of December 31, 2018.

(2) Principal actuarial assumptions as of June 30, 2019 and December 31, 2018 are as follows:

	2019 (%)	2018 (%)
Discount rate for defined benefit obligations	1.90 ~ 3.78	2.64 ~ 3.78
Expected rate of salary increase	2.70 ~ 5.83	2.70 ~ 5.83

(3) Changes in defined benefit obligations for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	1,609,055	1,330,559
Current service cost		108,967	84,915
Interest cost		29,820	28,232
Transferred from associates		2,251	1,113
Remeasurements:		240	-
Demographic assumption		77	-
Financial assumption		163	-
Benefits paid		(20,750)	(16,643)
Others		50	40
Ending balance	₩	1,729,633	1,428,216

(4) Changes in plan assets for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	1,608,832	1,337,848
Interest income		29,816	28,373
Contributions		1,570	91
Transferred from associates		3,173	1,099
Benefits paid		(25,136)	(23,755)
Remeasurements		(11,126)	(14,095)
Ending balance	₩	1,607,129	1,329,561

20. Defined Benefit Liabilities, Continued

(5) The amounts recognized in profit or loss for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019		2018	
	Three-month period	Six-month period	Three-month period	Six-month period
Current service cost	₩ 54,598	108,967	42,413	84,915
Net interest income	229	4	(72)	(141)
	₩ 54,827	108,971	42,341	84,774

(6) Details of plan assets as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

	2019	2018
Deposits	₩ 1,605,429	1,607,552
Others	1,700	1,280
	₩ 1,607,129	1,608,832

Actual return on plan assets for the six-month periods ended June 30, 2019 and 2018 amounted to ₩18,690 million and ₩14,277 million, respectively.

(7) Contributions to defined contribution plans amounting to ₩198 million (2018: ₩86 million) was recognized as cost of sales for the six-month period ended June 30, 2019.

21. Derivative Financial Instruments

(1) There were no derivative financial instruments as of June 30, 2019 and December 31, 2018.

(2) There were no gains or losses from derivative instruments for the six-month periods ended June 30, 2019 and 2018.

22. Capital Stock, Capital Surplus and Other Equity

(1) The Parent Company has 9,000,000,000 authorized shares and the face value per share is ₩5,000 as of June 30, 2019. The number of shares issued, common stock, capital surplus and other capital as of June 30, 2019 and December 31, 2018, are as follows:

(In millions of won and thousands of shares)

		2019	2018
Issued shares[1]		731,530	731,530
Capital stock:			
Common stock	₩	3,657,652	3,657,652
Capital surplus:			
Additional paid-in capital		3,625,797	3,625,797
Others		517,939	517,939
		4,143,736	4,143,736
Other equity:			
Acquisition cost of treasury shares		(2,508,427)	(2,508,427)
Share options		2,764	1,976
	₩	(2,505,663)	(2,506,451)
Number of treasury shares		44,001	44,001

[1] As of June 30, 2019, the number of listed shares is 728,002 thousand shares, which differs from total issued shares due to stock retirement.

(2) As of June 30, 2019 and December 31, 2018, the number of outstanding shares, which deducted treasury shares held by Parent Company from listed shares, is 684,002 thousand shares, respectively.

23. Accumulated Other Comprehensive Loss

(1) Details of accumulated other comprehensive loss as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018
Equity-accounted investees – share of other comprehensive income (loss)	₩	10,723	(18,166)
Foreign operations – foreign currency translation differences		(240,785)	(464,653)
	₩	(230,062)	(482,819)

(2) Changes in accumulated other comprehensive income (loss) for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019		
		Beginning	Change	Ending
Equity-accounted investees – share of other comprehensive income (loss)	₩	(18,166)	28,889	10,723
Foreign operations – foreign currency translation differences		(464,653)	223,868	(240,785)
	₩	(482,819)	252,757	(230,062)

(In millions of won)

		2018			
		Beginning	Change	Impacts on transition to K-IFRS No. 1109	Ending
Equity-accounted investees – share of other comprehensive income (loss)	₩	(20,442)	13,890	-	(6,552)
Loss on valuation of long-term investment assets		(10,735)	-	10,735	-
Foreign operations – foreign currency translation differences		(471,087)	211,858	-	(259,229)
	₩	(502,264)	225,748	10,735	(265,781)

24. Retained Earnings

Retained earnings as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

		2019	2018
Legal reserve[1]	₩	281,555	178,954
Discretionary reserve[2]		235,506	235,506
Unappropriated retained earnings[3]		42,117,507	41,619,141
	₩	42,634,568	42,033,601

[1] The Commercial Code of the Republic of Korea requires the Parent Company to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued capital stock. The reserve is not available for cash dividends payment, but may be transferred to capital stock or used to reduce accumulated deficit.
[2] Discretionary reserve is the reserve for technology development.
[3] Dividends in the amount of ₩1,026,003 million were approved at shareholders' meeting held on March 22, 2019 and paid during the six-month period ended June 30, 2019.

25. Revenue

(1) Details of revenue for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
Sale of goods	₩	6,435,048	13,188,856	10,357,773	19,063,617
Providing services		17,153	36,000	12,734	26,580
	₩	6,452,201	13,224,856	10,370,507	19,090,197

(2) Details of revenue by product and service types for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
DRAM	₩	4,804,492	10,157,629	8,321,201	15,201,717
NAND Flash		1,255,088	2,410,404	1,869,713	3,563,552
Others		392,621	656,823	179,593	324,928
	₩	6,452,201	13,224,856	10,370,507	19,090,197

(3) Revenue information by region based on the location of selling entities for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
Korea	₩	407,328	616,826	218,088	526,129
China		3,124,349	6,282,417	4,113,386	7,372,141
Taiwan		349,268	677,186	825,063	1,584,131
Asia (other than China and Taiwan)		550,667	1,181,036	1,236,795	2,226,877
U.S.A.		1,770,768	3,868,441	3,511,043	6,506,129
Europe		249,821	598,950	466,132	874,790
	₩	6,452,201	13,224,856	10,370,507	19,090,197

25. Revenue, Continued

(4) Details of revenue by the timing of revenue recognition during the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019		2018	
	Three-month period	Six-month period	Three-month period	Six-month period
Performance obligations satisfied at a point in time	₩ 6,435,048	13,188,856	10,357,773	19,063,617
Performance obligations satisfied over time	17,153	36,000	12,734	26,580
	₩ 6,452,201	13,224,856	10,370,507	19,090,197

(5) Revenue recognition policies and performance obligation

Revenue is measured based on the consideration promised in the contract with customers. The Group recognizes revenue when control of goods or services is transferred to the customers.

Revenue recognition policies regarding the nature and timing of performance obligations satisfaction in the contract are as follows:

	Nature of goods or services and timing of performance obligation satisfaction.	Revenue recognition under K-IFRS No. 1115.
Sale of goods	Revenue is recognized when (or as) goods are transferred to a customer and the customer obtains control of that asset, which is typically upon delivery or shipment depending on the terms of the contract. When the good is defective, the customer has granted the right to return the defective goods in exchange for a functioning product or cash.	Revenue is measured at the amount of consideration for the sale of goods, reflecting the expected amount of return estimated through historical information. The Group's right to recover products from customers on settling the refund liability is recognized as asset and Refund liability is recognized as well. Settling a refund liability shall initially be measured by reference to the former carrying amount of the product less any expected costs to recover those products. Refund liability is included in other current liabilities (Note 18) and right to recover products from customers on settling the refund liability is included in other current assets (Note 10). The Group updates the measurement of the asset arising from changes in expectations about products to be returned at the end of each reporting period.

26. Selling and Administrative Expenses

Selling and administrative expenses for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019		2018	
	Three-month period	Six-month period	Three-month period	Six-month period
Salaries	₩ 131,842	279,249	121,178	256,711
Defined benefit plan	11,882	23,334	7,908	15,510
Employee benefits	34,924	69,535	27,381	52,693
Commission	109,153	215,484	121,619	178,918
Depreciation	50,210	97,685	29,138	57,887
Amortization	200,818	397,602	109,960	220,922
Freight and custody charge	11,060	19,014	6,655	12,576
Legal cost	11,740	19,579	7,049	10,424
Rental	2,032	3,260	3,373	6,607
Taxes and dues	14,128	30,212	4,421	9,653
Training	10,235	22,107	6,307	13,371
Advertising	20,149	31,567	19,456	29,498
Utilities	2,497	5,921	2,304	5,895
Supplies	23,474	38,665	18,824	31,316
Repair	6,456	11,685	7,156	13,036
Travel and transportation	4,354	8,481	3,485	6,991
Sales promotion	13,807	30,528	16,587	33,462
Others	10,198	24,788	2,574	16,655
	668,959	1,328,696	515,375	972,125
Research and development:				
Expenditure on research and development	788,034	1,531,485	648,320	1,293,254
Development cost capitalized	(77,811)	(167,289)	(129,349)	(261,894)
	710,223	1,364,196	518,971	1,031,360
	₩ 1,379,182	2,692,892	1,034,346	2,003,485

27. Expenses by Nature

Nature of expenses for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019		2018	
	Three-month period	Six-month period	Three-month period	Six-month period
Changes in finished goods and work-in-process	₩ (332,992)	(907,115)	(179,338)	(560,142)
Raw materials and consumables	1,406,163	2,916,933	1,354,606	2,558,826
Labor costs	947,271	1,885,169	781,170	1,624,341
Depreciation and amortization	2,029,791	4,042,903	1,544,550	2,962,076
Royalty	37,832	71,924	37,490	93,034
Commission	512,270	1,002,539	426,867	781,664
Utilities	327,230	651,206	257,543	521,722
Repair	553,809	817,112	230,942	456,229
Outsourcing	283,039	573,865	260,149	500,455
Others	50,158	166,200	82,610	210,737
Total[1]	₩ 5,814,571	11,220,736	4,796,589	9,148,942

[1] Total expenses consist of cost of sales and selling and administrative expenses.

28. Finance Income and Expense

Finance income and expense for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019		2018	
	Three-month period	Six-month period	Three-month period	Six-month period
Finance income				
Interest income	₩ 6,290	17,596	15,911	43,193
Dividend income	40	82	1,633	1,979
Foreign exchange differences[1]	506,923	827,142	738,246	945,807
Gain on valuation of short-term investment assets	(14,774)	5,963	3,724	4,828
Gain on disposal of short-term investment assets	30,512	36,554	3,706	7,300
Gain on disposal of long-term investment assets	-	-	-	248
Gain on valuation of financial liabilities at fair value through profit or loss	1,070	1,070	-	-
	530,061	888,407	763,220	1,003,355
Finance expense				
Interest expenses	59,382	100,452	17,486	42,377
Foreign exchange differences	417,407	624,179	346,854	635,241
Loss on valuation of long-term investment assets	9	22	-	-
	476,798	724,653	364,340	677,618
Net finance income	₩ 53,263	163,754	398,880	325,737

[1] The foreign exchange differences of long-term investment assets amounting to ₩ 252,467 million are included.

29. Other Income and Expenses

(1) Other income for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019		2018	
	Three-month period	Six-month period	Three-month period	Six-month period
Gain on disposal of property, plant and equipment	₩ 18,749	18,951	7,476	13,244
Others	5,943	30,431	2,692	3,990
	₩ 24,692	49,382	10,168	17,234

(2) Other expenses for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

	2019		2018	
	Three-month period	Six-month period	Three-month period	Six-month period
Loss on disposal of property, plant and equipment	₩ 5,939	8,123	50,634	53,517
Loss on disposal of intangible assets	886	2,377	921	2,580
Impairment of intangible assets	-	70	-	3,463
Loss on disposal of trade receivables	2,414	4,023	1,414	3,649
Donation	33,128	37,685	26,946	27,993
Others	2,831	19,470	3,522	7,212
	₩ 45,198	71,748	83,437	98,414

30. Income Tax Expense

Income tax expense is recognized based on management's best estimate of the annual effective income tax rate expected for the full financial year multiplied by the pre-tax income of the interim reporting period. Income tax expense includes current tax expense adjustments related to prior periods.

31. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to ordinary shareholders of the Parent Company by the weighted average number of outstanding ordinary shares during the three and six-month periods.

(1) Basic earnings per share for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won, except for shares and per share amounts)

		2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
Profit attributable to ordinary shareholders of the Parent Company	₩	535,529	1,638,282	4,329,947	7,450,200
Weighted average number of outstanding ordinary shares[1]		684,001,795	684,001,795	706,001,795	706,001,795
Basic earnings per share (in won)	₩	783	2,395	6,133	10,553

[1] Weighted average number of ordinary shares outstanding is calculated as follows:

(In shares)

	2019		2018	
	Three-month period	Six-month period	Three-month period	Six-month period
Outstanding ordinary shares	728,002,365	728,002,365	728,002,365	728,002,365
Treasury shares	(44,000,570)	(44,000,570)	(22,000,570)	(22,000,570)
Weighted average number of outstanding ordinary shares	684,001,795	684,001,795	706,001,795	706,001,795

(2) Diluted earnings per share for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won, except for shares and per share amounts)

		2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
Profit attributable to ordinary shareholders of the Parent Company	₩	535,529	1,638,282	4,329,947	7,450,200
Weighted average number of diluted outstanding ordinary shares[1]		684,076,654	684,072,776	706,101,731	706,091,750
Diluted earnings per share (in won)	₩	783	2,395	6,132	10,551

[1] Weighted average number of diluted outstanding ordinary shares is calculated as follows:

(In share)

		2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
Weighted average number of outstanding ordinary shares	₩	684,001,795	684,001,795	706,001,795	706,001,795
Share options		74,859	70,981	99,936	89,955
Weighted average number of diluted outstanding ordinary shares	₩	684,076,654	684,072,776	706,101,731	706,091,750

32. Transactions with Related Parties and Others

(1) Details of related parties as of June 30, 2019 are as follows:

Type	Name of related parties
Associates	Stratio, Inc., SK China Company Limited, Gemini Partners Pte. Ltd., TCL Fund, SK South East Asia Investment Pte. Ltd., Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)
Joint ventures	HITECH Semiconductor (Wuxi) Co., Ltd., Hystars Semiconductor (Wuxi) Co., Ltd.
Other related parties	SK Telecom Co., Ltd., which has significant influence over the Group, SK Holdings Co., Ltd., which has control over SK Telecom Co., Ltd., and their subsidiaries

(2) Significant transactions for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		For the three-month period ended June 30, 2019			
	Company	Operating revenue and others	Operating expense and others	Asset acquisition	Dividend received
Associate	SK China Company Limited	₩ 32	2,355	-	-
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	703	161,782	-	14,458
	Hystars Semiconductor (Wuxi) Co., Ltd.	51	-	-	-
Other related parties	SK Telecom Co., Ltd.	37,339	4,074	2,922	-
	SK Holdings Co., Ltd.	6,454	72,485	90,502	-
	ESSENCORE Limited	221,865	-	-	-
	SK Engineering & Construction Co., Ltd.	16,944	-	502,576	-
	SK Energy Co., Ltd.	16,721	16,302	-	-
	SK Networks Co., Ltd.	3,335	3,435	-	-
	SKC solmics Co., Ltd.	156	21,408	282	-
	Chungcheong energy service Co., Ltd.	-	5,764	-	-
	SK Materials Co., Ltd.	1,070	19,932	-	-
	SK Siltron Co., Ltd.	8,207	112,630	-	-
	Others	35,860	141,027	5,290	-
		₩ 348,737	561,194	601,572	14,458

32. Transactions with Related Parties and Others, Continued

(2) Significant transactions for the three and six-month periods ended June 30, 2019 and 2018 are as follows, Continued:

(In millions of won)

		For the six-month period ended June 30, 2019			
	Company	**Operating revenue and others**	**Operating expense and others**	**Asset acquisition**	**Dividend received**
Associate	SK China Company Limited	₩ 36	4,636	-	-
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	1,803	330,282	-	14,458
	Hystars Semiconductor (Wuxi) Co., Ltd.	238	-	-	-
Other related parties	SK Telecom Co., Ltd.[1]	61,011	230,106	6,476	-
	SK Holdings Co., Ltd.[2]	14,160	133,052	129,533	-
	ESSENCORE Limited	397,926	-	-	-
	SK Engineering & Construction Co., Ltd.	30,359	-	587,760	-
	SK Energy Co., Ltd.	24,298	41,201	-	-
	SK Networks Co., Ltd.	5,909	5,975	-	-
	SKC solmics Co., Ltd.	375	41,123	909	-
	Chungcheong energy service Co., Ltd.	6	16,482	-	-
	SK Materials Co., Ltd.	2,146	38,991	-	-
	SK Siltron Co., Ltd.	16,587	218,829	-	-
	Others	64,259	281,298	9,291	-
		₩ 619,113	1,341,975	733,969	14,458

[1] Operating expense and others include dividend payments of ₩219,200 million.
[2] For the six-month period ended June 30, 2019, royalty paid for the use of the SK brand amounted to ₩41,345 million.

32. Transactions with Related Parties and Others, Continued

(2) Significant transactions for the three and six-month periods ended June 30, 2019 and 2018 are as follows, Continued:

(In millions of won)

		For the three-month period ended June 30, 2018			
	Company	Operating revenue and others	Operating expense and others	Asset acquisition	Dividend received
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	₩ 684	152,184	-	-
Other related parties	SK Telecom Co., Ltd.	178	3,340	705	-
	SK Holdings Co., Ltd.	318	70,275	73,877	-
	ESSENCORE Limited	240,887	-	-	-
	SK Engineering & Construction Co., Ltd.	2,655	150	474,696	-
	SK Energy Co., Ltd.	1,253	3,403	-	-
	SK Networks Co., Ltd.	-	1,167	-	-
	SKC solmics Co., Ltd.	-	4,456	367	-
	Chungcheong energy service Co., Ltd.	-	539	203	-
	HAPPYNARAE Co., Ltd.	10	130,499	12,414	-
	SK Materials Co., Ltd.	-	16,812	-	-
	SK Siltron Co., Ltd.	1,301	80,223	-	-
	Others	81	75,942	9,975	-
		₩ 247,367	538,990	572,237	-

(In millions of won)

		For the six-month period ended June 30, 2018			
	Company	Operating revenue and others	Operating expense and others	Asset acquisition	Dividend received
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	₩ 686	300,924	-	13,120
Other related parties	SK Telecom Co., Ltd.[1]	206	154,912	3,523	-
	SK Holdings Co., Ltd.[2]	592	113,611	119,973	-
	ESSENCORE Limited	494,524	-	-	-
	SK Engineering & Construction Co., Ltd.	3,002	292	1,031,237	-
	SK Energy Co., Ltd.	2,636	37,748	-	-
	SK Networks Co., Ltd.	-	2,370	10,600	-
	SKC solmics Co., Ltd.	-	9,684	463	-
	Chungcheong energy service Co., Ltd.	-	9,178	203	-
	HAPPYNARAE Co., Ltd.	20	250,113	24,712	-
	SK Materials Co., Ltd.	-	31,640	-	-
	SK Siltron Co., Ltd.	2,109	148,284	-	-
	Others	163	131,433	16,065	-
		₩ 503,938	1,190,189	1,206,776	13,120

[1] Operating expense and others include dividend payments of ₩146,100 million.
[2] For the six-month period ended June 30, 2018, royalty paid for the use of the SK brand amounted to ₩30,977 million.

32. Transactions with Related Parties and Others, Continued

(3) The balances of significant transactions as of June 30, 2019 and December 31, 2018 are as follows:

(In millions of won)

	2019		
	Company	**Trade receivables and others**	**Other payables and others**
Associate	SK China Company Limited	₩ 2	4,687
Joint ventures	HITECH Semiconductor (Wuxi) Co., Ltd.	319	103,104
	Hystars Semiconductor (Wuxi) Co., Ltd.	38	-
Other related parties	SK Telecom Co., Ltd.	1,145	3,327
	SK Holdings Co., Ltd.	3,500	202,938
	ESSENCORE Limited	62,318	-
	SK Engineering & Construction Co., Ltd.	12,187	551,197
	SK Energy Co., Ltd.	1,268	3,899
	SK Networks Co., Ltd.	733	483
	SKC solmics Co., Ltd.	54	12,334
	Chungcheong energy service Co., Ltd.	-	1,165
	SK Materials Co., Ltd.	338	11,411
	SK Siltron Co., Ltd.[1]	126,828	60,730
	Others	12,880	90,378
		₩ 221,610	1,045,653

[1] Trade receivables and others include advanced payment related to the purchase of wafer that amounts to ₩123,108 million.(Note 33-(9))

(In millions of won)

	2018		
	Company	**Trade receivables and others**	**Other payables and others**
Associate	SK China Company Limited	₩ 1	9,060
Joint ventures	HITECH Semiconductor (Wuxi) Co., Ltd.	33	102,932
	Hystars Semiconductor (Wuxi) Co., Ltd.	19	-
Other related parties	SK Telecom Co., Ltd	3,339	15,489
	SK Holdings Co., Ltd.	1,876	144,225
	ESSENCORE Limited	71,673	-
	SK Engineering & Construction Co., Ltd.	12,910	744,935
	SK Energy Co., Ltd.	5,350	9,005
	SK Networks Co., Ltd.	790	1,452
	SKC solmics Co., Ltd.	57	8,113
	Chungcheong energy service Co., Ltd.	4	3,644
	SK Materials Co., Ltd.	443	18,214
	SK Siltron Co., Ltd.	156,023	37,070
	Others	14,918	120,955
		₩ 267,436	1,215,094

32. Transactions with Related Parties and Others, Continued

(4) Key management compensation
The Group considers registered directors who have authority and responsibility for planning, directing and controlling the activities of the Group as key management. The compensation paid to key management for employee services for the three and six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019		2018	
		Three-month period	Six-month period	Three-month period	Six-month period
Salaries	₩	925	2,857	756	1,550
Defined benefit plan		101	203	88	176
Share-based payment		300	347	16	17
	₩	1,326	3,407	860	1,743

(5) The significant transactions between the Group and the companies that are in the same conglomerate group according to *'Fair Trade Law'* for the three and six-month periods ended June 30, 2019 and 2018 are as follows. These entities are not related parties according to K-IFRS No. 1024, *'Related Party Disclosures'*.

(In millions of won)

			2019			
			Operating revenue and others		Operating expense and others	
	Company		Three-month period	Six-month period	Three-month period	Six-month period
Companies in the Conglomerate	SK Chemicals Co., Ltd.	₩	2,566	4,686	408	776
	SK Bioscience Co., Ltd.		1,471	2,427	22	23
	ANTS Co., Ltd.		2	4	45	3,379
	Others		1,003	1,336	-	-
		₩	5,042	8,453	475	4,178

(In millions of won)

			2018			
			Operating revenue and others		Operating expense and others	
	Company		Three-month period	Six-month period	Three-month period	Six-month period
Company in the Conglomerate	SK Chemicals Co., Ltd.	₩	-	-	291	590

32. Transactions with Related Parties and Others, Continued

(6) The balances of significant transactions between the Group and the companies that are in the same conglomerate group designated by '*Fair Trade Law*'. The details of the balances as of June 30, 2019 and December 31, 2018 are as follows. These entities are not related parties according to K-IFRS No. 1024, *'Related Party Disclosures'*.

(In millions of won)

		2019	
	Company	Trade receivables and others	Other payables and others
Companies in the Conglomerate	SK Chemicals Co., Ltd.	₩ 861	200
	SK Bioscience Co., Ltd.	501	22
	ANTS Co., Ltd.	2	10
	Others	166	-
		₩ 1,530	232

(In millions of won)

		2018	
	Company	Trade receivables and others	Other payables and others
Companies in the Conglomerate	SK Discovery Co., Ltd.	₩ 5	-
	SK Chemicals Co., Ltd.	1,253	331
	SK Bioscience Co., Ltd.	884	13
		₩ 2,142	344

33. Commitments and Contingencies

(1) Significant pending litigations and claims of the Group as of June 30, 2019 are as follows:

(a) Lawsuit from Netlist, Inc.
Netlist, Inc. filed a lawsuit against the Parent Company and its subsidiaries including SK hynix America Inc. alleging infringement of multiple patents to the U.S. District Court for the Central District of California, on August 31, 2016 and June 14, 2017, to the U.S. International Trade Commission on September 1, 2016 and October 31, 2017 and to the German District Court of Munich and the Beijing Intellectual Property Court, respectively, on July 11, 2017. As of June 30, 2019, the patent infringement lawsuits filed by Netlist, Inc. in the U.S. have not been finalized and the final result cannot be predicted.

Meanwhile, the lawsuit filed to the U.S. International Trade Commission on September 1, 2016 was finalized on January 16, 2018 with the conclusion that the Parent Company and its subsidiaries did not infringe the patents of Netlist, Inc. Netlist, Inc. filed a petition on March 26, 2018.

In addition, regarding the lawsuit filed to the Beijing Intellectual Property Court on July 11, 2017, the Patent Reexamination Board ("PRB") determined that the patent was invalid on May 30, 2018. Accordingly, the patent infringement lawsuit was dismissed on June 26, 2018. Netlist, Inc. did not appeal PRB's decision that invalidated the patent and the decision was finalized.

With respect to the German litigation filed on July 11, 2017, the District Court of Munich rendered its decision finding no infringement of the utility model-in-suit by the Parent Company on January 31, 2019. Netlist, Inc. filed a notice of appeal against the decision to the Higher Regional Court of Munich on March 5. However, after the German Patent and Trademark Office's final decision invalidating all the claims of the utility model-in-suit on May 28, 2019, Netlist, Inc. withdrew the notice of appeal and the non-infringement decision of the District Court of Munich became the final and conclusive judgment on June 11, 2019.

(b) Price-fixing class-action lawsuits in North America
On April 27, 2018, a purported class-action lawsuit was filed against the Parent Company and its subsidiary, SK hynix America Inc. in the U.S. District Court for the Northern District of California asserting claims based on alleged price-fixing of DRAM products during the period from June 1, 2016 to February 1, 2018. Similar lawsuits were subsequently filed in federal court in the U.S., as well as in Canadian courts in British Columbia, Quebec and Ontario. As of June 30, 2019, the lawsuits filed have not been finalized and the Group is unable to predict the outcome of these matters and therefore cannot reliably estimate the range of possible loss.

(c) The antitrust investigation in China
The State Administration for Market Regulation of China initiated to investigate the violation of the antitrust law regarding on primary DRAM businesses' sales in China in May 2018. The pending case currently is under investigation. As of June 30, 2019, the Group is unable to predict the outcome of these matters and therefore cannot reliably estimate the range of possible loss.

(d) Other patent infringement claims and litigation
In addition to the above litigations, the Group has responded to various disputes related to intellectual property rights and has recognized a liability when it represents a present obligation as a result of past event and it is probable that an outflow of resources will arise and a loss can be reliably estimated.

(2) Technology and patent license agreements
The Group has entered into a number of patent license agreements with several companies. The related royalties are paid on a lump-sum or running basis in accordance with the respective agreements. The lump-sum royalties are expensed over the contract period using the straight-line method.

33. Commitments and Contingencies, Continued

(3) Contract for supply of industrial water

The Group has entered into a new contract with Veolia Water Industrial Development Co., Ltd. ("Veolia") under which the Group purchases industrial water from Veolia during period of June 2018 through May 2023. According to the contract, the Group is obligated to pay base service charges, which are predetermined and additional service charges which are variable according to the amount of water used.

(4) Post- process service contract with HITECH Semiconductor (Wuxi) Co., Ltd.(HITECH)

The Group has entered into an agreement with HITECH to be provided with post-process service by HITECH. The conditions of the service provided includes package, package test, modules and others. According to the agreement, the Group is liable to guarantee a certain level of margin to HITECH.

(5) Assets provided as collateral

Details of assets provided as collateral as of June 30, 2019 are as follows:

(In millions of won and millions of foreign currencies)

		Book value		Pledged amount		
		Currency	Amount	Currency	Amount	Remark
Land and Buidings	₩	KRW	57,784	USD	54 (KRW 62,442)	
				KRW	5,854	Borrowings for equipment and others
Machinery		KRW	4,089,735	USD	2,381 (KRW 2,753,766)	
				KRW	600,000	
	₩	KRW	4,147,519	USD	2,435 (KRW 2,816,208)	
				KRW	605,854	

Other than the above assets provided as collateral, certain right-of-use assets of the Group are pledged as collateral for the lease liabilities in accordance with lease contracts.

33. Commitments and Contingencies, Continued

(6) Financing agreements
Details of credit lines with financial institutions as of June 30, 2019 are as follows:

(In millions of won and millions of foreign currencies)

	Financial Institution	Commitment	Currency	Amount
The Parent Company	KEB Hana Bank and others	Import finance including usance	USD	275
		Comprehensive limit contract for import and export	USD	1,060
		Overdrafts with banks	KRW	20,000
		Accounts receivable factoring contracts which have no right to recourse	KRW	140,000
SK hynix Semiconductor (China) Ltd.	Agricultural Bank of China and others	Import finance including usance	RMB	1,440
			USD	392
SK hynix America Inc. and other sales entities	Citibank and others	Accounts receivable factoring contracts which have no right to recourse	USD	238
Domestic subsidiaries	KEB Hana Bank and others	Import finance including bills bought	USD	45
		Finance secured by accounts receivables	KRW	55,020
		Agent agreement for payment of goods received	KRW	12,500

33. Commitments and Contingencies, Continued

(7) Details of guarantees provided to others as of June 30, 2019 are as follows:

(In millions of U.S. dollars)

	Currency	Amount	Remark
Taiwan Semiconductor Manufacturing Company, Limited.[1]	USD	60	Guarantees for supply agreement

[1] The Group received a deposit of ₩1,000 million as collateral from ADTechnology Inc. regarding payment guarantee for Taiwan Semiconductor Manufacturing Company, Limited.

(8) Capital commitments
The Group's unrecorded commitments in relation to the capital expenditures on property, plant and equipment as of June 30, 2019 are ₩1,407,849 million (as of December 31, 2018: ₩1,857,092 million).

(9) Long-term purchase agreement for raw materials
The Group has entered into a procurement agreement with SK Siltron Co., Ltd. from 2019 to 2023 for a stable supply of wafer with an advanced payment of ₩150,000 million during the year ended December 31, 2017. The advanced payment used in connection with the purchase of wafer during the current period is ₩26,892 million, and the balance of the advance payment as of June 30, 2019 is ₩123,108 million. Meanwhile, SK Siltron Co., Ltd. has committed to providing a certain portion of its investment assets as collateral to secure the advanced payment.

(10) Investment in Toshiba Memory Corporation ("TMC")
In regards to the Group's interests in TMC through its investments in BCPE Pangea Intermediate holdings Cayman, L.P. ("SPC1") and BCPE Pangea Cayman2 Limited ("SPC2"), equity shares in TMC owned, directly or indirectly, by the Group are limited to a certain percentage during certain periods after the date of acquisition. In addition, during the periods, the Group does not have the right in appointing TMC's directors and is unable to exercise significant influence over decision-making for TMC's operation and management.

34. Cash Flows

(1) Reconciliations between profit and net cash inflow from operating activities for the six-month periods ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Profit for the period	₩	1,639,155	7,449,871
Adjustment			
Income tax expense		516,406	2,744,413
Interest expense		100,452	42,377
Interest income		(17,596)	(43,193)
Depreciation of property, plant and equipment		3,567,500	2,763,821
Depreciation of investment property		31	53
Amortization		448,013	259,590
Depreciation of right-of-use assets		133,147	-
Loss on disposal of property, plant and equipment		8,123	53,517
Loss on disposal of intangible assets		2,377	2,580
Impairment of intangible assets		70	3,463
Defined benefit plan		108,971	84,774
Compensation expense associated with stock option		788	569
Loss on foreign currency translation		246,537	276,398
Gain on disposal of property, plant and equipment		(18,951)	(13,244)
Gain on foreign currency translation		(309,218)	(442,996)
Gain on valuation of short-term investment assets		(5,963)	(4,828)
Gain on disposal of short-term investment assets		(36,554)	(7,300)
Loss on valuation of long-term investment assets		22	-
Gain on disposal of long-term investment assets		-	(248)
Gain on Financial liabilities measured at fair value		(1,070)	-
Gain on equity method investments, net		(10,053)	(8,472)
Others, net		3,842	1,787
Changes in operating assets and liabilities			
Decrease (increase) in trade receivables		1,714,414	(1,234,808)
Decrease in loans and other receivables		29,320	30,615
Increase in inventories		(1,138,054)	(714,232)
Decrease in other assets		36,835	16,691
Decrease in trade payables		(279,084)	(289,296)
Decrease in other payables		(42,119)	(40,573)
Decrease in other non-trade payables		(659,663)	(389,688)
Decrease in provisions		(15,217)	(51,758)
Increase (decrease) in other liabilities		(2,331)	69,428
Contributions to plan assets		(1,570)	(91)
Payment of defined benefit liabilities		(3,328)	(8,191)
Cash generated from operating activities	₩	6,015,232	10,551,029

(2) There were no significant transactions without inflows and outflows of cash for the six-month periods ended June 30, 2019, and 2018 except for reclassifications between long-term and short-term balances.

34. Cash Flows, Continued

(3) Changes in liabilities arising from financial activities during the years ended June 30, 2019 and 2018 are as follows:

(In millions of won)

		2019	2018
Beginning balance	₩	5,281,937	4,171,270
Adjustment due to the transition to K-IFRS No.1116[1]		1,123,937	-
Beginning balance after transition adjustments		6,405,874	4,171,270
Cash flows from financing activities			
Proceeds from borrowings		5,864,012	2,063,692
Repayments of borrowings		(2,462,930)	(947,475)
Repayments of lease liabilities		(136,032)	-
Foreign currency differences and others		185,115	126,774
Present value discount (interest expense)		13,806	809
Interest paid		(1,300)	-
Ending balance	₩	9,868,545	5,415,070

[1] Lease liabilities are recognized additionally as the Group initially applied K-IFRS No. 1116 as of January 1, 2019.

35. Share-based Payment

(1) The Group accounts for share-based payment in which the Group has a choice of either cash-settled payment or equity-settled payment in accordance with its substance. The details of share options as of June 30, 2019 are as follows:

(In shares)

	Total numbers of share option granted	Exercised	Forfeited or Cancelled	Outstanding at June 30, 2019
1st	99,600	-	-	99,600
2nd	99,600	-	-	99,600
3rd	99,600	-	-	99,600
4th	7,747	-	-	7,747
5th	7,223	-	-	7,223
6th	8,171	-	-	8,171
7th	61,487	-	-	61,487
8th	61,487	-	-	61,487
9th	61,487	-	-	61,487
	506,402	-	-	506,402

35. Share-based Payment, Continued

(1) The Group accounts for share-based payment in which the Group has a choice of either cash-settled payment or equity-settled payment in accordance with its substance. The details of share options as of June 30, 2019 are as follows, Continued:

	Grant date	Service Period for Vesting	Exercisable Period	Exercise price (in won)
1st	March 24, 2017	March 24, 2017 - March 24, 2019	March 25, 2019 - March 24, 2022	48,400
2nd	March 24, 2017	March 24, 2017 - March 24, 2020	March 25, 2020 - March 24, 2023	52,280
3rd	March 24, 2017	March 24, 2017 - March 24, 2021	March 25, 2021 - March 24, 2024	56,460
4th	January 1, 2018	January 1, 2018 - December 31, 2019	January 1, 2020 - December 31, 2022	77,440
5th	March 28, 2018	March 28, 2018 - March 28, 2020	March 29, 2020 - March 28, 2023	83,060
6th	Februrary 28, 2019	February 28, 2019 - February 28, 2021	March 1, 2021 - February 29, 2024	73,430
7th	March 22, 2019	March 22, 2019 - March 22, 2021	March 23, 2021 - March 22, 2024	71,560
8th	March 22, 2019	March 22, 2019 - March 22, 2022	March 23, 2022 - March 22, 2025	77,290
9th	March 22, 2019	March 22, 2019 - March 22, 2023	March 23, 2023 - March 22, 2026	83,470

(2) Measurement of fair value

The compensation cost is calculated by applying a binomial option-pricing model in estimating the fair value of the option at grant date. The inputs used are as follows:

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Expected volatility	23.23%	23.23%	23.23%	22.50%	25.30%	25.60%	26.20%	26.20%	26.20%
Estimated fair value of share options (in won)	10,026	9,613	9,296	16,687	18,362	16,505	17,744	16,888	16,093
Dividend yield ratio	1.20%	1.20%	1.20%	0.78%	1.23%	1.36%	1.32%	1.32%	1.32%
Risk free ratio	1.86%	1.95%	2.07%	2.38%	2.46%	1.89%	1.82%	1.88%	1.91%

(3) The compensation expense for the six-month period ended June 30, 2019 was ₩788 million (2018: ₩569 million).

Independent Auditors' Report

To The Board of Directors and Shareholders of
SK hynix, Inc.:

Opinion

We have audited the accompanying consolidated financial statements of SK hynix, Inc. and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as of December 31, 2018 and 2017, the related consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes to the consolidated financial statements, including significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2018 and 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing. 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 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.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements as of and for the year ended December 31, 2018. 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.

(I) Measurement of fair value of financial instruments.

As described in note 6 and note 12 to the consolidated financial statements, the acquisition costs of equity investment ("SPC1") and convertible bonds ("SPC2") acquired during 2018 relating to the Group's investment in Toshiba Memory Corporation ("TMC") were JPY 266,000 million and JPY 129,000 million, respectively. Those are measured at the fair value using significant unobservable inputs as of December 31, 2018 and amount to ₩4,183,005 million in the aggregate.

Financial instruments measured at fair value through profit or loss can contain misstatements due to the involvement of significant judgments and the use of assumptions and estimates. Accordingly, we identified the measurement of fair value of financial instruments in connection with the investments in SPC1 and SPC2 as a key audit matter.

The primary procedures we performed to address this key audit matter included:

- Assessing the qualification and objectivity of the external institution engaged by the Group to assess the fair value of the financial instruments;
- Reading investment agreements to understand the relevant investment terms, identifying any conditions that were relevant to the valuation of financial instruments and confirming whether investment terms and conditions are considered in valuation;
- Engaging our internal valuation specialists to assist us in evaluating the valuation result from the report issued by the external institution, and the valuation models and assumptions used by the Group to value investments in SPC1 and SPC2;
- Performing sensitivity analysis of significant unobservable inputs used in estimating the fair value of investments in SPC1 and SPC2 and assessing the impact of changes in the inputs on the fair value measurement and whether there were any indicators of management bias; and
- Assessing the appropriate disclosures of the consolidated financial statements for the valuation of fair value and key assumptions and source data in accordance with K-IFRS.

(II) Assessment and disclosure of contingencies for price-fixing class-action lawsuits in North America and the antitrust investigation in China.

As described in note 34, there are a number of ongoing legal disputes and regulatory investigations as of December 31, 2018, which included the price-fixing class-action lawsuits in North America and the antitrust investigation in China. As described in note 3-(17) to the consolidated financial statements, a provision should be recognized for these litigation and investigation if they represent a present obligation as a result of past event, and it is probable that an outflow of resources will occur, and reliable estimation of amounts can be made.

As the outcome of these litigation and regulatory investigation is uncertain, any position taking by management will involve significant judgment and estimation. The estimates underlying these contingent liabilities involve management's significant judgment in interpreting various relevant regulations, laws, and practices, and evaluation of past cases of jurisdictions. Accordingly, we identified the assessment of contingent liabilities and related disclosures for the above litigation and regulatory investigation as a key audit matter.

The primary procedures we performed to address this key audit matter included:

- Discussing the status and potential exposures with the Company internal legal counsel and obtaining confirmation letters regarding the litigation and regulatory investigation from the Company's external legal counsels, including their views on the likely outcome of each litigation or regulatory investigation and whether the magnitude of potential exposure to the Group could be reliably estimated;
- Assessing the competence, capability and objectivity of external legal counsels, by considering professional qualifications, fee arrangements and other relevant factors;
- Assessing the recognition of provisions depending on whether those are a present obligation as a result of past event, probable that an outflow of resources, and reliable estimation of amounts in accordance with accounting standard; and
- Assessing whether the disclosures detailing the above litigation and regulatory investigation adequately disclose the potential liabilities of the Group.

Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibility 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 misstatements, whether due to fraud or error, and to issue an auditors' 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 Korean Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in 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 Korean Standards on Auditing, 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, then we are required to draw attention in our auditors' 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 auditors' 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 of business activities with the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and 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 auditors' 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 auditors' report is Seung Yeoul Yang.

/s/ KPMG Samjong Accounting Corp.
Seoul, Korea
February 25, 2019

This report is effective as of February 25, 2019, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

SK HYNIX, INC. and Subsidiaries
Consolidated Statements of Financial Position
As of December 31, 2018 and 2017

(In millions of won)

	Note		2018	2017
Assets				
Current assets				
Cash and cash equivalents	*5,6*	₩	2,349,319	2,949,991
Short-term financial instruments	*5,6,7*		523,579	4,674,862
Short-term investment assets	*5,6*		5,496,452	929,801
Trade receivables, net	*5,6,8,33*		6,319,994	5,552,795
Loans and other receivables, net	*5,6,8,33*		18,392	37,613
Inventories, net	*9*		4,422,733	2,640,439
Current tax assets	*31*		22,252	1,305
Other current assets	*10*		741,425	523,638
			19,894,146	17,310,444
Non-current assets				
Investments in associates and joint ventures	*11*		562,194	359,864
Long-term investment assets	*5,6,12*		4,325,550	43,226
Loans and other receivables, net	*5,6,8,33*		68,514	42,410
Other financial assets	*5,6,7*		310	273
Property, plant and equipment, net	*13,15,34*		34,952,617	24,062,601
Intangible assets, net	*14,30*		2,678,770	2,247,290
Investment property, net	*13,15*		1,400	2,468
Deferred tax assets	*21,31*		544,016	599,783
Employee benefit assets	*20*		5,164	13,385
Other non-current assets	*10,34*		625,654	736,720
			43,764,189	28,108,020
Total assets		₩	63,658,335	45,418,464

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries
Consolidated Statements of Financial Position, Continued
As of December 31, 2018 and 2017

(In millions of won)

	Note		2018	2017
Liabilities				
Current liabilities				
Trade payables	*5,6,33*	₩	1,096,380	758,578
Other payables	*5,6,33*		3,681,933	2,724,547
Other non-trade payables	*5,6,16,33*		1,879,520	1,340,225
Borrowings	*5,6,17,34*		1,614,303	773,780
Provisions	*19*		56,208	81,351
Current tax liabilities	*31*		4,555,670	2,385,876
Other current liabilities	*18*		147,838	51,776
			13,031,852	8,116,133
Non-current liabilities				
Other non-trade payables	*5,6,16*		15,231	3,412
Borrowings	*5,6,17,34*		3,667,634	3,397,490
Defined benefit liabilities, net	*20*		5,387	6,096
Deferred tax liabilities	*21*		6,597	5,554
Other non-current liabilities	*18*		79,303	68,860
			3,774,152	3,481,412
Total liabilities			16,806,004	11,597,545
Equity				
Equity attributable to owners of the Parent Company				
Capital stock	*1,23*		3,657,652	3,657,652
Capital surplus	*23*		4,143,736	4,143,736
Other equity	*23*		(2,506,451)	(771,100)
Accumulated other comprehensive loss	*24*		(482,819)	(502,264)
Retained earnings	*25*		42,033,601	27,287,256
Total equity attributable to owners of the Parent Company			46,845,719	33,815,280
Non-controlling interests			6,612	5,639
Total equity			46,852,331	33,820,919
Total liabilities and equity		₩	63,658,335	45,418,464

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries

Consolidated Statements of Comprehensive Income

For the years ended December 31, 2018 and 2017

(In millions of won, except per share information)

	Note		2018	2017
Revenue	*4,26,33*	₩	40,445,066	30,109,434
Cost of sales	*28,33*		15,180,838	12,701,843
Gross profit			25,264,228	17,407,591
Selling and administrative expense	*27,28*		4,420,478	3,686,265
Operating profit			20,843,750	13,721,326
Finance income	*29*		1,691,955	996,468
Finance expenses	*29*		1,142,134	1,249,617
Share of profit of equity-accounted investees	*11*		13,007	12,367
Other income	*30*		112,810	77,882
Other expenses	*30*		178,358	118,860
Profit before income tax			21,341,030	13,439,566
Income tax expense	*31*		5,801,046	2,797,347
Profit for the year			15,539,984	10,642,219
Other comprehensive income (loss)				
Item that will never be reclassified to profit or loss:				
Remeasurements of defined benefit liability, net of tax	*20*		(77,029)	2,762
Items that are or may be reclassified to profit or loss:				
Foreign operations – foreign currency translation differences, net of tax	*24*		7,534	(387,683)
Loss on valuation of long-term investment asset			-	(10,735)
Equity-accounted investees – share of other comprehensive income (loss), net of tax	*11,24*		2,276	(26,386)
Other comprehensive loss for the year, net of tax			(67,219)	(422,042)
Total comprehensive income for the year		₩	15,472,765	10,220,177
Profit attributable to:				
Owners of the Parent Company		₩	15,540,111	10,641,512
Non-controlling interests			(127)	707
Total comprehensive income (loss) attributable to:				
Owners of the Parent Company			15,471,792	10,221,113
Non-controlling interests			973	(936)
Earnings per share				
Basic earnings per share (in won)	*32*		22,255	15,073
Diluted earnings per share (in won)	*32*		22,252	15,072

See accompanying notes to the consolidated financial statements

SK HYNIX, INC. and Subsidiaries
Consolidated Statements of Changes in Equity
For the years ended December 31, 2018 and 2017

(In millions of won)

		Attributable to owners of the Parent Company							
	Note	**Capital stock**	**Capital surplus**	**Other equity**	**Accumulated other comprehensive income (loss)**	**Retained earnings**	**Total**	**Non-controlling interests**	**Total equity**
Balance at January 1, 2017		₩ 3,657,652	4,143,736	(771,913)	(79,103)	17,066,583	24,016,955	6,575	24,023,530
Total comprehensive income									
Profit for the year		-	-	-	-	10,641,512	10,641,512	707	10,642,219
Remeasurements of defined benefit liability, net of tax	*20*	-	-	-	-	2,762	2,762	-	2,762
Loss on valuation of long-term investment asset	*12,24*	-	-	-	(10,735)	-	(10,735)	-	(10,735)
Other comprehensive income from joint venture and associate, net of tax	*11,24*	-	-	-	(26,386)	-	(26,386)	-	(26,386)
Foreign currency translation differences for foreign operations, net of tax	*24*	-	-	-	(386,040)	-	(386,040)	(1,643)	(387,683)
Total comprehensive income		-	-	-	(423,161)	10,644,274	10,221,113	(936)	10,220,177
Transactions with owners of the Parent Company									
Dividends paid	*25*	-	-	-	-	(423,601)	(423,601)	-	(423,601)
Share-based payment transactions		-	-	813	-	-	813	-	813
Total transactions with owners of the Parent Company		-	-	813	-	(423,601)	(422,788)	-	(422,788)
Balance at December 31, 2017		₩ 3,657,652	4,143,736	(771,100)	(502,264)	27,287,256	33,815,280	5,639	33,820,919

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries

Consolidated Statements of Changes in Equity, Continued

For the years ended December 31, 2018 and 2017

(In millions of won)

	Note	Attributable to owners of the Parent Company							
		Capital stock	Capital surplus	Other equity	Accumulated other comprehensive income (loss)	Retained earnings	Total	Non-controlling interests	Total equity
Balance at December 31, 2017		₩ 3,657,652	4,143,736	(771,100)	(502,264)	27,287,256	33,815,280	5,639	33,820,919
Adjustments on initial application of K-IFRS No.1109		-	-	-	10,735	(10,735)	-	-	-
Balance at January 1, 2018		3,657,652	4,143,736	(771,100)	(491,529)	27,276,521	33,815,280	5,639	33,820,919
Total comprehensive income									
Profit for the year		-	-	-	-	15,540,111	15,540,111	(127)	15,539,984
Remeasurements of defined benefit liability, net of tax	*20*	-	-	-	-	(77,029)	(77,029)	-	(77,029)
Other comprehensive income from joint venture and associate, net of tax	*11,24*	-	-	-	2,276	-	2,276	-	2,276
Foreign currency translation differences for foreign operations, net of tax	*24*	-	-	-	6,434	-	6,434	1,100	7,534
Total comprehensive income		-	-	-	8,710	15,463,082	15,471,792	973	15,472,765
Transactions with owners of the Parent Company									
Acquisition of treasury shares		-	-	(1,736,514)	-	-	(1,736,514)	-	(1,736,514)
Dividends paid	*25*	-	-	-	-	(706,002)	(706,002)	-	(706,002)
Share-based payment transactions		-	-	1,163	-	-	1,163	-	1,163
Total transactions with owners of the Parent Company		-	-	(1,735,351)	-	(706,002)	(2,441,353)	-	(2,441,353)
Balance at December 31, 2018		₩ 3,657,652	4,143,736	(2,506,451)	(482,819)	42,033,601	46,845,719	6,612	46,852,331

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries
Consolidated Statements of Cash Flows
For the years ended December 31, 2018 and 2017

(In millions of won)

	Note		2018	2017
Cash flows from operating activities				
Cash generated from operating activities	*35*	₩	25,825,017	15,373,261
Interest received			81,323	41,680
Interest paid			(126,029)	(120,332)
Dividends received			15,258	14,841
Income tax paid			(3,568,370)	(618,836)
Net cash provided by operating activities			22,227,199	14,690,614
Cash flows from investing activities				
Net change in short-term financial instruments			4,174,667	(2,776,527)
Net change in short-term investment asset			(4,519,395)	657,523
Decrease in other financial assets			116	308
Increase in other financial assets			(100)	(167)
Collection of loans and other receivables			21,824	18,437
Increase in loans and other receivables			(48,424)	(22,009)
Proceeds from disposal of long-term investment asset			7,118	3,431
Acquisition of long-term investment asset			(4,012,799)	(26,204)
Cash inflows from derivative transactions			-	902
Cash outflows from derivative transactions			-	(1,201)
Proceeds from disposal of property, plant and equipment			131,754	244,897
Acquisition of property, plant and equipment			(16,036,146)	(9,128,303)
Proceeds from disposal of intangible assets			2,532	3,249
Acquisition of intangible assets			(933,139)	(784,911)
Receipt of government grants			17,081	5,900
Acquisition of investments in associates			(200,508)	(114,487)
Acquisition of subsidiary, net of cash acquired			(33,330)	-
Net cash used in investing activities			(21,428,749)	(11,919,162)
Cash flows from financing activities				
Proceeds from borrowings	*35*		3,125,721	782,330
Repayments of borrowings	*35*		(2,078,522)	(710,635)
Acquisition of treasury shares			(1,736,514)	-
Dividends paid			(706,002)	(423,601)
Net cash used in financing activities			(1,395,317)	(351,906)
Effect of movements in exchange rates on cash and cash equivalents			(3,805)	(83,341)
Net increase (decrease) in cash and cash equivalents			(600,672)	2,336,205
Cash and cash equivalents at beginning of the year			2,949,991	613,786
Cash and cash equivalents at end of the year		₩	2,349,319	2,949,991

See accompanying notes to the consolidated financial statements.

1. Reporting Entity

(1) General information about SK hynix, Inc. (the "Parent Company" or the "Company") and its subsidiaries (collectively the "Group") is as follows:

The Parent Company manufactures, distributes and sells semiconductor products and its shares have been listed on the Korea Exchange since 1996. The Parent Company's headquarters is located at 2091 Gyeongchung-daero, Bubal-eup, Icheon-si, Gyeonggi-do, South Korea, and the Group has manufacturing facilities in Icheon-si and Cheongju-si, South Korea, and Wuxi and Chongqing, China.

As of December 31, 2018, the shareholders of the Parent Company are as follows:

Shareholder	Number of shares	Percentage of ownership (%)
SK Telecom Co., Ltd.	146,100,000	20.07
National Pension Service	65,890,385	9.05
Other investors	472,011,410	64.84
Treasury shares	44,000,570	6.04
	728,002,365	100.00

The Parent Company's common shares and depositary receipts (DRs) are listed on the Stock Market of Korea Exchange and the Luxembourg Stock Exchange.

1. Reporting Entity, Continued

(2) Details of the Group's consolidated subsidiaries as of December 31, 2018 and 2017 are as follows:

Company	Location	Business	Ownership (%)	
			2018	2017
SK hyeng Inc.	Korea	Construction service	100	100
SK hystec Inc.	Korea	Business support service	100	100
Siliconfile Technologies Inc.[1]	Korea	Development and manufacturing of electronic component	-	100
Happymore Inc.	Korea	Manufacturing and cleaning cleanroom suits	100	100
SK hynix system ic Inc.[1]	Korea	Semiconductor manufacturing and sales	100	100
Happynarae Co., Ltd. [2]	Korea	Industrial material logistics	100	-
SK hynix America Inc.	U.S.A.	Semiconductor sales	97.74	97.74
SK hynix Deutschland GmbH	Germany	Semiconductor sales	100	100
SK hynix Asia Pte. Ltd.	Singapore	Semiconductor sales	100	100
SK hynix Semiconductor Hong Kong Ltd.	Hong Kong	Semiconductor sales	100	100
SK hynix U.K. Ltd.	U.K.	Semiconductor sales	100	100
SK hynix Semiconductor Taiwan Inc.	Taiwan	Semiconductor sales	100	100
SK hynix Japan Inc.	Japan	Semiconductor sales	100	100
SK hynix Semiconductor (Shanghai) Co., Ltd.	China	Semiconductor sales	100	100
SK hynix Semiconductor India Private Ltd.[3]	India	Semiconductor sales	100	100
SK hynix (Wuxi) Semiconductor Sales Ltd.	China	Semiconductor sales	100	100
SK hynix Semiconductor (China) Ltd.[4]	China	Semiconductor manufacturing	100	100
SK hynix Semiconductor (Wuxi) Ltd.[4]	China	Semiconductor manufacturing	-	100
SK hynix Semiconductor (Chongqing) Ltd.[5]	China	Semiconductor manufacturing	100	100
SK hynix Italy S.r.l.	Italy	Semiconductor research and development	100	100
SK hynix memory solutions America Inc.[6]	U.S.A.	Semiconductor research and development	100	100
SK hynix memory solutions Taiwan Ltd.[7]	Taiwan	Semiconductor research and development	100	100
SK hynix memory solutions Eastern Europe LLC.[8]	Belarus	Semiconductor research and development	100	100
SK APTECH Ltd.	Hong Kong	Overseas investment	100	100
SK hynix Venture Hong Kong Ltd.	Hong Kong	Overseas investment	100	100
SK hynix (Wuxi) Investment Ltd.[9]	China	Overseas investment	100	-
SK hynix (Wuxi) Industry Development Ltd.[10]	China	Foreign hospital construction	100	-
SK hynix Happiness (Wuxi) Hospital Management Ltd. [10]	China	Foreign hospital operation	100	-
SK hynix system ic (Wuxi) Co., Ltd.[11]	China	Overseas Semiconductor manufacturing and sales	100	-
SK hynix happy (Wuxi) cleaning Ltd.[10]	China	Building management	100	-
SUZHOU HAPPYNARAE Co., Ltd.[12]	China	Overseas industrial material logistics	100	-
CHONGQING HAPPYNARAE Co., Ltd.[12]	China	Overseas industrial material logistics	100	-
MMT (Money Market Trust)	Korea	Money Market Trust	100	100

1. Reporting Entity, Continued

(2) Details of the Group's consolidated subsidiaries as of December 31, 2018 and 2017 are as follows, Continued:

[1] SK hynix system ic Inc. merged with Siliconfile Technologies Inc. during the year ended December 31, 2018.
[2] The Group obtained control over Happynare Co., Ltd. as of December 28, 2018 by acquisition of 100% its shares from SK telecom Co., Ltd and others.
[3] Subsidiary of SK hynix Asia Pte. Ltd.
[4] SK hynix Semiconductor (China) Ltd. merged SK hynix Semiconductor (Wuxi) Ltd. during the year ended December 31, 2018.
[5] Subsidiary of SK APTECH Ltd.
[6] Name of the subsidiary is changed from SK hynix memory solutions Inc. to SK hynix memory solutions America Inc. during the year ended December 31, 2018.
[7] Name of the subsidiary is changed from SK hynix Flash Solution Taiwan to SK hynix memory solutions Taiwan Ltd. during the year ended December 31, 2018.
[8] Name of the subsidiary is changed from Softeq Flash Solutions LLC. to SK hynix memory solutions Eastern Europe LLC. during the year ended December 31, 2018.
[9] SK hynix (Wuxi) Investment Ltd. was established during the year ended December 31, 2018 and is a subsidiary of SK hynix Semiconductor (China) Ltd.
[10] SK hynix (Wuxi) Industry Development Ltd., SK hynix Happiness (Wuxi) Hospital Management Ltd., and SKhynix happy (wuxi) cleaning Ltd. were established during the year ended December 31, 2018 and are subsidiaries of SK Hynix (Wuxi) Investment Ltd.
[11] SK hynix system ic (Wuxi) Co., Ltd. was estabilshed during the year ended December 31, 2018 and is a subsidiary of SK hynix system ic Inc.
[12] Subsidiary of Happynarae Co., Ltd.

(3) Changes in the consolidated subsidiaries for the year ended December 31, 2018 are as follows:

	Company	Reason
Excluded from consolidation	Siliconfile Technologies Inc.	Excluded due to merger
Excluded from consolidation	SK hynix Semiconductor (Wuxi) Ltd.	Excluded due to merger
Included in consolidation	SK hynix (Wuxi) Investment Ltd.	Included due to new establishment
Included in consolidation	SK hynix (Wuxi) Industry Development Ltd.	Included due to new establishment
Included in consolidation	SK hynix Happiness (Wuxi) Hospital Management Ltd.	Included due to new establishment
Included in consolidation	SK hynix system ic (Wuxi) Co., Ltd.	Included due to new establishment
Included in consolidation	Happynarae Co., Ltd.	Included due to acquisition
Included in consolidation	SUZHOU HAPPYNARAE Co., Ltd.	Included due to acquisition
Included in consolidation	CHONGQING HAPPYNARAE Co., Ltd.	Included due to acquisition
Included in consolidation	SK hynix happy (Wuxi) cleaning Ltd.	Included due to new establishment

1. Reporting Entity, Continued

(4) Major subsidiaries' summarized separate statements of financial position as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018			2017		
	Assets	**Liabilities**	**Equity**	**Assets**	**Liabilities**	**Equity**
SK hynix system ic Inc.	₩ 550,323	92,989	457,334	360,254	77,958	282,296
SK hynix America Inc.	3,013,637	2,707,732	305,905	2,522,348	2,259,210	263,138
SK hynix Deutschland GmbH	99,641	60,244	39,397	108,470	70,430	38,040
SK hynix Asia Pte. Ltd.	933,268	848,990	84,278	636,286	559,400	76,886
SK hynix Semiconductor Hong Kong Ltd.	347,109	204,622	142,487	1,043,889	918,305	125,584
SK hynix U.K. Ltd.	536,208	518,036	18,172	325,434	308,999	16,435
SK hynix Semiconductor Taiwan Inc.	449,054	427,498	21,556	566,155	536,592	29,563
SK hynix Japan Inc.	837,362	770,819	66,543	632,590	569,810	62,780
SK hynix Semiconductor (Shanghai) Co., Ltd.	1,199,602	1,116,282	83,320	414,850	379,888	34,962
SK hynix (Wuxi) Semiconductor Sales Ltd.	535,819	492,934	42,885	13,347	12,677	670
SK hynix Semiconductor (China) Ltd.	6,390,490	2,158,715	4,231,775	4,043,100	322,545	3,720,555
SK hynix Semiconductor (Chongqing) Ltd.	540,284	124,451	415,833	388,033	195,849	192,184

(5) Major subsidiaries' summarized separate statements of comprehensive income for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018			2017		
	Revenue	**Profit (loss)**	**Total comprehensive income (loss)**	**Revenue**	**Profit (loss)**	**Total comprehensive income (loss)**
SK hynix system ic Inc.	₩ 554,264	60,649	60,360	231,537	(7,716)	(7,876)
SK hynix America Inc.	14,296,762	30,800	30,800	11,096,526	(7,243)	(7,243)
SK hynix Deutschland GmbH	503,375	1,380	1,380	476,709	(120)	(120)
SK hynix Asia Pte. Ltd.	3,531,313	3,999	3,999	2,645,084	2,872	2,872
SK hynix Semiconductor Hong Kong Ltd.	3,710,359	11,486	11,486	8,717,022	19,456	19,456
SK hynix U.K. Ltd.	1,517,706	1,005	1,005	1,088,697	953	953
SK hynix Semiconductor Taiwan Inc.	2,955,717	2,475	2,475	2,629,453	12,446	12,446
SK hynix Japan Inc.	1,084,079	(410)	(467)	940,254	1,761	1,761
SK hynix Semiconductor (Shanghai) Co., Ltd.	7,291,257	49,634	49,634	1,332,939	8,230	8,230
SK hynix (Wuxi) Semiconductor Sales Ltd.	4,832,879	43,163	43,163	30,342	92	92
SK hynix Semiconductor (China) Ltd.	2,518,849	84,089	84,089	2,185,341	338,969	338,969
SK hynix Semiconductor (Chongqing) Ltd.	406,839	27,125	27,125	355,982	23,441	23,441

(6) There are no significant non-controlling interests to the Group as of December 31, 2018 and 2017.

2. Basis of Preparation

The consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS"), as prescribed in the *Act on External Audits of Corporations in the Republic of Korea*.

The consolidated financial statements were authorized for issuance by the board of directors on January 23, 2019, which will be submitted for approval at the shareholders' meeting to be held on March 22, 2019.

This is the first set of the Group's annual financial statements in which K-IFRS No. 1115 *'Revenue from Contracts from Customers'* and K-IFRS No. 1109 *'Financial Instrument'* have been applied. Changes to significant accounting policies are described in note 3-(26).

(1) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis, except for the following material items in the consolidated statements of financial position:

- derivative financial instruments are measured at fair value
- financial instruments at fair value through profit or loss are measured at fair value
- assets or liabilities for defined benefit plans are recognized at the net of the total present value of defined benefit obligations less the fair value of plan assets

(2) Functional and presentation currency

Financial statements of entities within the Group are presented in functional currency and the currency of the primary economic environment in which each entity operates. Consolidated financial statements of the Group are presented in Korean won, which is the Parent Company's functional and presentation currency.

(3) Use of estimates and judgments

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

(a) Critical judgments

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is included in the following notes for classification of leases.

(b) Assumptions and estimation uncertainties

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next fiscal year is included in the following notes for net realizable value of inventories, impairment of development costs and goodwill, recognition and measurement of provisions, measurement of defined benefit obligations, recognition of deferred tax assets, valuation of short and long-term investment assets.

2. Basis of Preparation, Continued

(3) Use of estimates and judgments, Continued

(c) Fair value measurement

The Group establishes fair value measurement policies and procedures as its accounting policies and disclosures require fair value measurements for various financial and non-financial assets and liabilities. Such policies and procedures are executed by the valuation department, which is responsible for the review of significant fair value measurements including fair values classified as level 3 in the fair value hierarchy.

The valuation department regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation department assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of IFRS, including the level in the fair value hierarchy in which the valuations should be classified.

The Group reports significant valuation issues to the audit committee.

When measuring the fair value of an asset or a liability, the Group uses observable market data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

If various inputs used to measure fair value of assets or liabilities fall into different levels of the fair value hierarchy, the Group classifies the assets and liabilities at the lowest level of inputs among the fair value hierarchy, which is significant to the entire measured value. The Group recognizes transfers between levels at the end of the reporting period of which such transfers occurred.

Information about assumptions used for fair value measurements is included in financial risk management, note 6.

3. Significant Accounting Policies

The significant accounting policies applied by the Group in preparation of its consolidated financial statements are explained below. Except for the new accounting standards that are effective for annual periods beginning on or after January 1, 2018, the accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

(1) Operating Segments

An operating segment is a component of the Group that: 1) engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with other components of the Group, 2) whose operating results are reviewed regularly by the Group's chief operating decision maker ("CODM") in order to allocate resources and assess its performance, and 3) for which discrete financial information is available. The Group's CODM is the board of directors, who do not receive and therefore do not review discrete financial information for any component of the Group. Consequently, no operating segment information is included in these consolidated financial statements. Entity wide disclosures of geographic, product and customer information are provided in note 4 and 26.

(2) Consolidation

(a) Business combination

A business combination is accounted for by applying the acquisition method, unless it is a combination involving entities or businesses under common control.

The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred and during period of service, except if related to the issue of debt or equity securities according to K-IFRS No. 1032 and K-IFRS No. 1109.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss.

Any contingent consideration is measured at fair value at the date of acquisition. If an obligation to pay contingent consideration that meets the definition of a financial instrument is classified as equity, then it is not remeasured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

If share-based payment awards (replacement awards) are required to be exchanged for awards held by the acquiree's employees (acquiree's awards), then all or a portion of the amount of the acquirer's replacement awards is included in measuring the consideration transferred in the business combination. This determination is based on the market-based measure of the replacement awards compared with the market-based measure of the acquiree's awards and the extent to which the replacement awards relate to pre-combination service.

(b) Non-controlling interests

Non-controlling interests are measured at their proportionate share of the acquiree's identifiable net assets at the date of acquisition.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

3. Significant Accounting Policies, Continued

(2) Consolidation, Continued

(c) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the entity. Consolidation of an investee begins from the date the Group obtains control of the investee and cease when the Group loses control of the investee.

(d) Loss of control

If the Group loses control of a subsidiary, the Group derecognizes the assets and liabilities of the former subsidiary from the consolidated statement of financial position and recognizes gain or loss associated with the loss of control attributable to the former controlling interest. Any investment retained in the former subsidiary is recognized at its fair value when control is lost.

(e) Interests in equity-accounted investees

The Group's interest in equity-accounted investees comprise interests in an associate and a joint venture. An associate are these entities in which the Group has significant influence, but not control or joint control, over the entity's financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Interests in associates and the joint venture are initially recognized at cost including transaction costs. Subsequent to initial recognition, their carrying amounts are increased or decreased to recognize the Group's share of the profit or loss and changes in equity of the associate or the joint venture. Distributions from equity-accounted investees are accounted for as deduction from the carrying amounts.

(f) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. The Group's share of unrealized gain incurred from transactions with equity-accounted investees are eliminated and unrealized loss are eliminated using the same basis if there are no evidence of asset impairments.

(g) Business combinations under common control

The assets and liabilities acquired in the combination of entities or business under common control are recognized at the carrying amounts recognized previously in the consolidated financial statements of the ultimate parent. The difference between consideration transferred and carrying amounts of net assets acquired is added to or deducted from other capital adjustments.

(3) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments.

3. Significant Accounting Policies, Continued

(4) Inventories

The cost of inventories is based on the weighted average method (except for goods in-transit that is based on the specific identification method), and includes expenditures incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing inventories to their existing location and condition. In the case of manufactured inventories and work-in-process, cost includes an appropriate share of production overheads based on the actual capacity of production facilities. However, the normal capacity is used for the allocation of fixed production overheads if the actual level of production is lower than the normal capacity.

Inventories are measured at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and selling expenses. The amount of any write-down of inventories to net realizable value and all losses of inventories shall be 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, shall be recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

(5) Non-derivative financial assets

(a) Initial recognition and measurement

Trade and other receivables, and debt investment are initially recognized when they are originated. Other financial assets and financial liabilities are recognized when the Group becomes a party to the contractual provisions of the instruments.

A financial asset and financial liability (unless it is an account receivable - trade without a significant financing component that is initially measured at the transaction price) are initially measured at fair value plus, for an item not at fair value through profit or loss (FVTPL), transaction costs that are directly attributable to its acquisition.

(b) Classification and subsequent measurements

On initial recognition, a financial asset is classified as measured at: amortized cost; fair value through other comprehensive income (FVOCI) - debt investment; FVOCI - equity investment; or FVTPL. The classification of financial assets is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. In case of changing its business model, all affected financial asset are reclssified on the first day of the first reporting period after the change in the business model.

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is to hold assets to collect contractual cash flow; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A debt investments is measured at FVOCI if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Group may irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an investment-by-investment basis and irrevocable election can be made at initial recognition.

3. Significant Accounting Policies, Continued

(5) Non-derivative financial assets, Continued

(b) Classification and subsequent measurements, Continued

All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. This includes all derivative financial assets. On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

The Group makes an assessment of the objective of the business model in which, financial assets is held at a portfolio level because this best reflects the way the business is managed and information is provided to management. The information considered includes:

- The stated policies and objectives for the portfolio and the operation of those policies in practice;
- how the performance of the business model and the financial assets held within that business model are evaluated and reported to the entity's key management personnel;
- the risks that affect the performance of the business model (and the financial assets held within that business model) and, in particular, the way in which those risks are managed;
- how managers of the business are compensated (e.g. whether the compensation is based on the fair value of the assets managed or on the contractual cash flows collected); and
- the frequency, volume and timing of sales of financial assets in prior periods, the reason for those sales and expectation about future sales activity for financial asset.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with the Group's continuing recognition of the assets.

For the purposes of this assessment, 'principal' is defined as the fair value of the financial assets on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs (e.g. liquidity risk and administrative costs), as well as a profit margin.

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers:

- contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable-rate features;
- prepayment and extension features; and
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features).

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

3. Significant Accounting Policies, Continued

(5) Non-derivative financial assets, Continued

(b) Classification and subsequent measurements, Continued

The following accounting policies apply to subsequent measurements of financial assets.

Financial assets at FVTPL	These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss.
Financial assets at amortized cost	These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.
Debt investments at FVOCI	These assets are subsequently measured at fair value. Interest income is calculated using the effective interest method. Foreign exchange gains and losses and impairment are recognized in profit or loss. Other net gains and losses are recognized in OCI. On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.
Equity investments at FVOCI	These assets are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss.

(c) De-recognition

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group enters into transactions whereby it transfers assets recognized in its statement of financial position, but retain either all or substantially all of the risks and rewards of the transferred assets. In these cases, the transferred assets are not derecognized.

3. Significant Accounting Policies, Continued

(5) Non-derivative financial assets, Continued

(d) Offsetting between financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to offset the recognized amounts, and there is the intention to settle on a net basis or to realize the asset and settle the liability simultaneously.

(6) Derivative financial instruments

The Group enters into a derivative financial instruments to manage its exposure to interest rate. Embedded derivatives are separated from the host contract and accounted for separately only if the host contract is not a financial assets and certain criteria are met.

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and the changes therein are generally recognized in profit or loss.

The Group designates certain derivatives as hedging instruments to hedge the variability in cash flows associated with highly probable forecast transactions arising from changes in interest rates.

At inception of designated hedging relationships, 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 highly effective in offsetting changes in fair values or cash flows of the hedged item.

(7) Impairment of financial assets

(a) Recognition of impairment on financial assets

The Group recognizes loss allowances for expected credit losses (ECLs) on:

- financial assets measured at amortized costs; and
- contract assets.

The Group's impairment losses are likely to be recognized a lifetime ECL based on the extent of increase in credit risk since inception except for below asset to be recognized loss allowances measured on 12-month.

- credit risk of debt instruments is low at the end of reporting date
- credit risk has not increased significantly since the initial recognition of debt investment (lifetime ECL: ECL that resulted from all possible default events over the expected life of a financial instrument)

The Group adopted an accounting policy to recognize loss allowances at an amount equal to lifetime expected credit losses for trade receivables and contract assets.

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition and estimating expected credit loss, The Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

Lifetime expected credit loss that resulted from all possible default events over the expected life of a financial instrument. And 12-month ECLs that resulted from possible default events within the 12 months (or a shorter period if the expected life of the instrument is less than 12 months) after the reporting date.

3. Significant Accounting Policies, Continued

(7) Impairment of financial assets, Continued

(a) Recognition of impairment on financial assets, Continued

The longest period to consider when measuring expected credit losses is the longest term for which the Group is exposed to credit risk.

(b) Measurement of expected credit loss

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of financial instrument.

(c) Credit-impaired financial instrument

A debt instrument carried at amortized cost and fair value through other comprehensive income(FVOCI) is assessed at the end of each reporting period to determine whether there is objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that the loss event had a negative effect on the estimated future cash flows of that asset that can be estimated reliably.

Objective evidence that a financial asset is impaired includes:

- significant financial difficulty of the issuer or borrower;
- a breach of contract, such as default or delinquency in interest or principal payments;
- the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- it becoming probable that the borrower will enter bankruptcy or other financial reorganization; or
- the disappearance of an active market for that financial asset because of financial difficulties

(d) Presentation of credit loss allowance on financial position

For loss allowance on financial assets measured at amortized cost is deducted from the carrying amount of the respective assets, while loss allowance on debt instruments at FVOCI is recognized in OCI.

(e) De-recognition

The Group derecognizes a financial asset when it has no reasonable expectations of recovering the contractual cash flows on a financial asset in its entirety or a portion thereof. The Group assess whether there are reasonable expectations of recovering the contractual cash flows from customers and individually assess the timing and amount of write-off. The Group does not expect that such write-off will be recovered but they may be subject to collection activity according to the Groups past due collection process.

3. Significant Accounting Policies, Continued

(8) Property, plant and equipment

Property, plant and equipment are initially measured at cost. The cost of property, plant and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent to initial recognition, an item of property, plant and equipment is carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of property, plant and equipment at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the cost will flow to the Group and it can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day repair and maintenance are recognized in profit or loss as incurred.

Property, plant and equipment, except for land, are depreciated on a straight-line basis over estimated useful lives that appropriately reflect the pattern in which the asset's future economic benefits are expected to be consumed.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recognized as other income or expenses.

The estimated useful lives of the Group's property, plant and equipment are as follows:

	Useful lives (years)
Buildings	10 - 50
Structures	10 - 30
Machinery	4 - 15
Vehicles	4 - 10
Others	3 - 15

Depreciation methods, useful lives, and residual values are reviewed at the end of each reporting period and, if appropriate, accounted for as changes in accounting estimates.

(9) Borrowing costs

The Group capitalizes borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. Other borrowing costs are recognized in expense as incurred. A qualifying asset is an asset that requires a substantial period of time to get ready for its intended use or sale. Financial assets and inventories that are manufactured or otherwise produced over a short period of time are not qualifying assets. Assets that are ready for their intended use or sale when acquired are not qualifying assets.

To the extent that the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization as the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings. To the extent that the Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization by applying a capitalization rate to the expenditures on that asset. The capitalization rate is the weighted average of the borrowing costs applicable to the borrowings of the Group that are outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs that the Group capitalizes during a period does not exceed the amount of borrowing costs incurred during that period.

3. Significant Accounting Policies, Continued

(10) Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost less accumulated amortization and accumulated impairment losses.

Goodwill arising from business combinations is recognized as the excess of the consideration transferred in the acquisition over the net fair value of the identifiable assets acquired and liabilities assumed. Any deficit is a bargain purchase that is recognized in profit or loss. Goodwill is measured at cost less accumulated impairment losses.

Amortization of intangible assets is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value of intangible assets is zero. However, certain intangible assets are determined as having indefinite useful lives and not amortized as there is no foreseeable limit to the period over which the assets are expected to be available for use.

The estimated useful lives of the Group's intangible assets are as follows:

	Useful lives (years)
Industrial rights	5 - 10
Development costs	2
Other intangible assets	4 - 50

Useful lives and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which it relates. All other expenditures, including expenditures on internally generated goodwill and brands, are recognized in profit or loss as incurred.

3. Significant Accounting Policies, Continued

(11) Government grants

Government grants are not recognized unless there is reasonable assurance that the Group will comply with the grant's conditions and that the grant will be received.

(a) Grants related to assets

Government grants whose primary condition is that the Group purchases, constructs or otherwise acquires non-current assets are deducted in calculating the carrying amount of the asset. The grant is recognized in profit or loss over the useful lives of depreciable assets.

(b) Grants related to income

Government grants which are intended to compensate the Group for expenses incurred are recognized in profit or loss by as deduction of the related expenses.

(12) Investment property

Property held for the purpose of earning rental income or benefiting from capital appreciation is classified as investment property. Investment property is initially measured at its cost. Transaction costs are included in the initial measurement. Subsequently, investment property is carried at cost less accumulated depreciation and impairment losses.

Subsequent costs are recognized in the carrying amount of investment property at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the cost will flow to the Group and it can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day repair and maintenance are recognized in profit or loss as incurred.

Investment property except for land, are depreciated on a straight-line basis over 10 to 50 years depending on the useful lives.

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting period and, if appropriate, accounted for as changes in accounting estimates.

3. Significant Accounting Policies, Continued

(13) Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from employee benefits, inventories, and deferred tax assets, are reviewed at the end of the reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Group estimates the recoverable amount of an individual asset; however if it is impossible to measure the individual recoverable amount of an asset, the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. The value in use is estimated by applying a pre-tax discount rate that reflect current market assessments of the time value of money and the risks specific to the asset or CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or CGU.

An impairment loss is recognized in loss if the carrying amount of an asset or a CGU exceeds its recoverable amount.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from business combination. Any impairment identified at the CGU level will first reduce the carrying value of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis.

Except for impairment losses in respect of goodwill, which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(14) Leases

The Group classifies and accounts for leases as either a finance or operating lease, depending on the terms. Leases where the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases. All other leases are classified as operating leases.

(a) Finance leases

At the commencement of the lease term, the Group recognizes as finance lease assets and finance lease liabilities in its consolidated statements of financial position, the lower amount of the fair value of the leased property and the present value of the minimum lease payments, each determined at the inception of the lease. Any initial direct costs are added to the amount recognized as an asset.

Minimum lease payments are apportioned between the finance expense and the reduction of the outstanding liability. The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. Contingent rents are charged as expenses in the periods in which they are incurred.

The depreciable amount of a leased asset is allocated to each accounting period during the period of expected use on a systematic basis consistent with the depreciation policy the lessee adopts for depreciable assets that are owned. If there is no reasonable certainty that the lessee will obtain ownership by the end of the lease term, the asset is fully depreciated over the shorter of the lease term and its useful life. The Group reviews whether the leased asset is impaired.

3. Significant Accounting Policies, Continued

(14) Leases, Continued

(b) Operating leases

Leases where the lessor retains a significant portion of the risks and rewards of ownership are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are recognized in profit or loss on a straight-line basis over the period of the lease.

(c) Determining whether an arrangement contains a lease

Determining whether an arrangement is, or contains, a lease is based on the substance of the arrangement and requires an assessment of whether fulfillment of the arrangement is dependent on the use of a specific asset or assets (the asset) and the arrangement conveys a right to use the asset.

At inception or reassessment of the arrangement, the Group separates payments and other consideration required by such an arrangement into those for the lease and those for other elements on the basis of their relative fair values. If the Group concludes for a financial lease that it is impracticable to separate the payments reliably, the Group recognizes an asset and a liability at an amount equal to the fair value of the underlying asset that was identified as the subject of the lease. Subsequently, the liability is reduced as payments are made and an imputed finance expense on the liability recognized using the purchaser's incremental borrowing rate of interest.

(15) Non-derivative financial liabilities

The Group classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss or other financial liabilities in accordance with the substance of the contractual arrangement and the definitions of financial liabilities. The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability.

(a) Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading or designated as such upon initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, any directly attributable transaction costs are recognized in profit or loss as incurred.

(b) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value less any directly attributable transaction costs. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest rate method.

(c) Derecognition of financial liability

The Group derecognizes financial liability when its contractual obligations are discharged, cancelled or expired. The Group also derecognizes a financial liability, when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized a fair value. On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred of liabilities assumed) is recognized in profit or loss.

3. Significant Accounting Policies, Continued

(16) Employee benefits

(a) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the reporting period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

(b) Other long-term employee benefits

Other long-term employee benefits include employee benefits that are settled beyond 12 months after the end of the reporting period in which the employees render the related service, and are calculated at the present value of the amount of future benefit that employees have earned in return for their service in the current and prior periods. Remeasurements are recognized in profit or loss in the period in which they arise.

(c) Retirement benefits: defined benefit plans

As of the end of reporting period, defined benefits liabilities relating to defined benefit plans are recognized as present value of defined benefit obligations, net of fair value of plan assets.

The calculation is performed annually by an independent actuary using the projected unit credit method. When the fair value of plan assets exceeds the present value of the defined benefit obligation, the Group recognizes an asset, to the extent of the present value of any economic benefits available in the form of refunds from the plan or reduction in the future contributions to the plan.

Remeasurements of the net defined benefit liability (asset) comprise of actuarial gains and losses, the return on plan assets excluding amounts included in net interest on the net defined benefit liability (asset), and any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset), and are recognized in other comprehensive income. The Group determines net interests on net defined benefit liability (asset) by multiplying discount rate determined at the beginning of the annual reporting period and considers changes in net defined benefit liability (asset) from contributions and benefit payments. Net interest costs and other costs relating to the defined benefit plan are recognized through profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains or losses on a settlement of defined benefit plan when the settlement occurs.

(d) Retirement benefits: defined contribution plans

When an employee has provided service for a certain period of time in relation to the defined contribution plan, the contribution to the defined contribution plan is recognized in profit or loss except to be included in the cost of the asset. The contributions to be paid are recognized as liabilities (accrued expenses) less the contributions that have been already paid.

(e) Termination benefits

The Group recognizes a liability and expense for termination benefits at the earlier of the period when the Group can no longer withdraw the offer of those benefits and the period when the Group recognizes costs for a restructuring. If benefits are not payable within 12 months after the end of the reporting period, then they are discounted to their present value.

3. Significant Accounting Policies, Continued

(17) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Where some or all of the expenditures required to settle a provision are expected to be reimbursed by another party, the reimbursement is recognized when, and only when, it is virtually certain that reimbursement will be received if the Group settles the obligation. The reimbursement is treated as a separate asset.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimates. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

A provision is used only for expenditures for which the provision was originally recognized.

(18) Emissions Rights

The Group accounts for greenhouse gases emission right and the relevant liability as below pursuant to the *Act on Allocation and Trading of Greenhouse Gas Emission*.

(a) Greenhouse Gases Emission Right

Greenhouse Gases Emission Right consists of emission allowances, which are allocated from the government free of charge or purchased from the market. The cost includes any directly attributable costs incurred during the normal course of business.

Emission rights held for the purpose of performing the obligation is classified as intangible asset and is initially measured at cost and after initial recognition are carried at cost less accumulated impairment losses. Emission rights held for short-swing profits are classified as current asset and are measured at fair value with any changes in fair value recognized as profit or loss in the respective reporting period.

The Group derecognizes an emission right asset when the emission allowance is unusable, disposed or submitted to government in which the future economic benefits are no longer expected to be probable.

(b) Emission liability

Emission liability is a present obligation of submitting emission rights to the government with regard to emission of greenhouse gas. Emission liability is recognized when it is probable that outflows of resources will be required to settle the obligation and the costs required to perform the obligation are reliably estimable. Emission liability is an amount of estimated obligations for emission rights to be submitted to the government for the performing period. The emission liability is measured based on the expected quantity of emission for the performing period in excess of emission allowance in possession and the unit price for such emission rights in the market at the end of the reporting period.

3. Significant Accounting Policies, Continued

(19) Foreign currencies

(a) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency at the exchange rate at the reporting data. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are translated to the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences arising on the settlement or retranslation of monetary items are recognized in profit or loss, except for differences arising on the retranslation of the net investment in a foreign operation, which are recognized in other comprehensive income. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss.

(b) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to presentation currency at exchange rates at the end of reporting period. The income and expenses of foreign operations are translated to functional currency at exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation is treated as assets and liabilities of the foreign operation. Thus, they are expressed in the functional currency of the foreign operation and translated at the exchange rates at the end of reporting date.

When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

(20) Equity capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issuance of ordinary shares is recognized as a deduction from equity, net of any tax effects.

When the Group repurchases its share capital, the amount of the consideration paid is recognized as a deduction from equity and classified as treasury shares. The profits or losses from the purchase, disposal, reissue, or retirement of treasury shares are not recognized as current profit or loss. If the Group acquires and retains treasury shares, the consideration paid or received is directly recognized in equity.

3. Significant Accounting Policies, Continued

(21) Share-based payment

The Group has granted shares or share options to its employees. For equity-settled share-based payment transactions, the Group measures the goods or services received, and the corresponding increase in equity as a capital adjustment at the fair value of the goods or services received, unless that fair value cannot be estimated reliably. If the Group cannot reliably estimate the fair value of the goods or services received, the Group measures their value, and the corresponding increase in equity, indirectly, by reference to the fair value of the equity instruments granted. If the fair value of the equity instruments cannot be estimated reliably at the measurement date, the Group measures them at their intrinsic value and recognizes the goods or services received based on the number of equity instruments that ultimately vest.

For cash-settled share-based payment transactions, the Group measures the goods or services acquired and the liability incurred at the fair value of the liability. Until the liability is settled, the Group remeasures the fair value of the liability at each reporting date and at the date of settlement, with changes in fair value recognized in profit or loss for the period.

(22) Revenue from contracts with customers

The Group has initially applied K-IFRS No. 1115, *'Revenue from contracts with customers'* from January 1, 2018. The Group's accounting policies relating to revenue from contracts with customers are described in note 26 and the effect of the initial applying of K-IFRS No. 1115 is described in note 3-(26).

(23) Finance income and finance expenses

The Group's finance income and finance expenses include:
- Interest income;
- Interest expense;
- Dividend income;
- The net gain or loss on financial assets at fair value through profit or loss;
- Gain or loss on foreign exchange(currency) translation for financial asset and liabilities;
- Impairment losses and reversals on investment debt securities carried at amortised cost method; and
- The remeasurement gain on the previously held equity interest at the point of business combination

The Group uses effective interest rate method for recognizing interest income and expense. Dividend income is recognized in profit or loss on the date that the Group's right to receive dividend is established.

The 'effective interest rate' is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to:
- The gross carrying amount of the financial asset; or
- The amortised cost of the financial liability

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortised cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by appling the effective interest rate to the amortised cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

3. Significant Accounting Policies, Continued

(24) Income taxes

Income tax expense comprises current and deferred tax. Current and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

(a) Current tax

Current tax is the expected tax payable or refundable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period and any adjustment to tax payable in respect of previous years. The taxable profit is different from the accounting profit for the period since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit (tax loss) of future periods, and non-taxable or non-deductible items from the accounting profit. The tax expense is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period.

(b) Deferred tax

Deferred tax is recognized, using the asset-liability method, in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes.

The Group recognizes a deferred tax liability for all taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Group recognizes deferred tax assets for all deductible temporary differences including unused tax loss and tax credit to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduces the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, 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 deferred tax 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 only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis. If there are any additional income tax expense incurred in accordance with dividend payments, such income tax expense is recognized when liabilities relating to the dividend payments are recognized.

3. Significant Accounting Policies, Continued

(25) Earnings per share

The Group presents basic and diluted earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the Parent Company by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of outstanding ordinary shares, adjusted for own shares held, for the effects of all dilutive potential ordinary shares including convertible notes.

(26) Changes in accounting policies

The Group has initially adopted K-IFRS No. 1115 *'Revenue from Contracts from Customers'* and K-IFRS No. 1109 *'Financial Instruments'* from January 1, 2018. A number of other new standards are effective from January 1, 2018 and they do not have significant impact on the Group's consolidated financial statements.

(a) K-IFRS No. 1115, *'Revenue from Contracts with Customers'*

K-IFRS No. 1115 is a comprehensive framework for determining when and how much revenue is recognized. It replaced K-IFRS No. 1018 '*Revenue*', K-IFRS No. 1011 *'Construction Contract'*, K-IFRS No. 2031 *'Revenue: Barter Transactions Involving Advertising Services'*, K-IFRS No. 2113 *'Customer Loyalty Program'*, K-IFRS No. 2115 *'Agreements for the construction of real estate'* and K-IFRS No. 2118 *'Transfers of assets from customers'*.

The Group has adopted K-IFRS No. 1115, *'Revenue from contracts with customers'* as of January 1, 2018 as the initial application date. The following summarizes the impact on the Group of adopting the standard.

(i) Sales with right of return
In general, the Group's contract with customers allows a customer to return the products. Under K-IFRS No. 1115, the Group initially recognizes revenue, which is measured at the gross transaction price, less the expected level of returns using the guidance on estimating variable considerations and the constraint. The expected level of returns is estimated by using the method the Group expects to better predict the amount of consideration to which it will be entitled. Also, the Group includes an amount of variable consideration in the transaction price only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the return period expires. The Group recognizes the amounts received or receivable for which the Group does not expect to be entitled as a refund liability.

(ii) Delivery of product ("C-terms")
When applying K-IFRS No. 1115, sales of products and delivery of products (i.e. shipping service) are identified as separate performance obligations in the contracts with customers. However, for transactions for which the customer obtains control over the products upon delivery, which is the Group's most common transaction term, those two performance obligations are not separately identified as the control over the products is transferred upon the completion of delivery. However, for the export transactions for which the shipping terms are on shipment basis ("C-terms"), the two performance obligations are separately accounted for because delivery of products is performed after the control over the products is transferred to the customer. The transaction price allocated to the performance obligation of delivery service is recognized when the obligation of delivery of the product is satisfied with the related shipping costs recognized as cost of sales.

3. Significant Accounting Policies, Continued

(26) Change in accounting policies, Continued

(a) K-IFRS No. 1115, *'Revenue from Contracts with Customers'*, Continued

The following tables summarize the impacts of adopting K-IFRS No. 1115 on the consolidated statement of financial position as of January 1, 2018.

(In millions of won)		December 31, 2017	Adjustments - Sales with right of return	January 1, 2018
Assets				
Current assets				
Other current assets	₩	523,638	17,884	541,522
Others		16,786,806	-	16,786,806
		17,310,444	17,884	17,328,328
Non-current assets		28,108,020	-	28,108,020
Total assets		45,418,464	17,884	45,436,348
Liabilities				
Current liabilities				
Provisions		81,351	(30,672)	50,679
Other current liabilities		51,776	48,556	100,332
Others		7,983,006	-	7,983,006
		8,116,133	17,884	8,134,017
Non-current liabilities		3,481,412	-	3,481,412
Total liabilities		11,597,545	17,884	11,615,429
Equity				
Total equity attributable to owners of the Parent Company		33,815,280	-	33,815,280
Non-controlling interests		5,639	-	5,639
Total equity		33,820,919	-	33,820,919
Total liabilities and equity	₩	45,418,464	17,884	45,436,348

The following tables summarize the impacts of adopting K-IFRS No. 1115 on the consolidated statement of financial position as of December 31, 2018, and the consolidated statement of comprehensive income for the year then ended. There was no material impact on the statement of cash flows for year ended December 31, 2018.

3. Significant Accounting Policies, Continued

(26) Change in accounting policies, Continued

(a) K-IFRS No. 1115, *'Revenue from Contracts with Customers'*, Continued

Details of the impact on the consolidated statement of financial position as of December 31, 2018 are as follows:

(In millions of won)

		As reported	Adjustments - Sales with right of return	Amounts without adoption of K-IFRS No. 1115
Assets				
Current assets				
Other current assets	₩	741,425	(24,261)	717,164
Others		19,152,721	-	19,152,721
		19,894,146	(24,261)	19,869,885
Non-current assets		43,764,189	-	43,764,189
Total assets		63,658,335	(24,261)	63,634,074
Liabilities				
Current liabilities				
Provisions		56,208	55,986	112,194
Other current liabilities		147,838	(80,247)	67,591
Others		12,827,806	-	12,827,806
		13,031,852	(24,261)	13,007,591
Non-current liabilities		3,774,152	-	3,774,152
Total liabilities		16,806,004	(24,261)	16,781,743
Equity				
Total equity attributable to owners of the Parent Company		46,845,719	-	46,845,719
Non-controlling interests		6,612	-	6,612
Total equity		46,852,331	-	46,852,331
Total liabilities and equity	₩	63,658,335	(24,261)	63,634,074

3. Significant Accounting Policies, Continued

(26) Change in accounting policies, Continued

(a) K-IFRS No. 1115, *'Revenue from Contracts with Customers'*, Continued

Details of the impact on the consolidated statement of comprehensive income for the year ended December 31, 2018, are as follows:

(In millions of won)

		As reported	Adjustments - Delivery of product	Amounts without adoption of K-IFRS No. 1115
Revenue	₩	40,445,066	-	40,445,066
Cost of sales		15,180,838	(23,424)	15,157,414
Gross profit		25,264,228	23,424	25,287,652
Selling and administrative expense		4,420,479	23,424	4,443,903
Operating profit		20,843,749	-	20,843,749
Finance income		1,691,955	-	1,691,955
Finance expenses		1,142,134	-	1,142,134
Share of profit of equity-accounted investees		13,007	-	13,007
Other income		112,810	-	112,810
Other expenses		178,357	-	178,357
Profit before income tax		21,341,030	-	21,341,030
Income tax expense		5,801,046	-	5,801,046
Profit for the period		15,539,984	-	15,539,984
Other comprehensive loss		(67,219)	-	(67,219)
Total comprehensive income for the period	₩	15,472,765	-	15,472,765

3. Significant Accounting Policies, Continued

(26) Change in accounting policies, Continued

(b) K-IFRS No. 1109, '*Financial Instruments'*

K-IFRS No. 1109, *'Financial Instruments*' sets out requirements for recognizing and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standard replaces K-IFRS No. 1039, *'Financial Instrument: Recognition and Measurement*'. The Group has taken advantage of the exemption allowing it not to restate the comparative information for prior periods with respect to classification and measurement (including impairment) changes.

The following table summarizes the impact of transition to K-IFRS No. 1109 on the opening balance of equity as of January 1, 2018.

(In millions of won)

		Accumulated other comprehensive income (loss)	Retained earnings
Beginning equity under K-IFRS No. 1039	₩	(502,264)	27,287,256
Reclassification from available-to-sale to FVTPL		10,735	(10,735)
Beginning equity under K-IFRS No. 1109	₩	(491,529)	27,276,521

3. Significant Accounting Policies, Continued

(26) Change in accounting policies, Continued

(b) K-IFRS No. 1109, '*Financial Instruments'*, Continued

Details of reclassification of the financial asset categories upon adoption of K-IFRS No. 1109, which was initially adopted as of January 1, 2018, are as follows:

(In millions of won)

	Original Classification according to K-IFRS No. 1039	New Classification according to K-IFRS No. 1109		Original carrying amount in accordance with K-IFRS No. 1039	New Carring amount in accordance with K-IFRS No. 1109
Cash and cash equivalents	Loans and receivables	Amortized cost	₩	2,949,991	2,949,991
Short-term financial instruments	Loans and receivables	Amortized cost		4,674,862	4,674,862
Short-term investment assets	Financial assets at fair value through profit or loss	FVTPL		929,801	929,801
Trade receivables	Loans and receivables	Amortized cost		5,552,795	5,552,795
Other receivables	Loans and receivables	Amortized cost		80,023	80,023
Other financial assets	Loans and receivables	Amortized cost		273	273
Long-term investment assets[1]	Available-for-sale financial assets	FVTPL		43,226	43,226
			₩	14,230,971	14,230,971

[1] As of January 1, 2018, available-for-sale financial assets for equity investments amounting to ₩43,226 million were reclassified to financial assets measured at FVTPL. As the contractual terms of these assets do not give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, these assets were not designated as financial assets measured at amortized cost. As a result of this reclassification, as at January 1, 2018, other comprehensive loss of ₩10,735 million was reclassified to retained earnings. There was no change in fair value of these financial assets for the year ended December 31, 2018.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective

The following new standards, amendments to standards are effective for annual periods beginning after January 1, 2018 and earlier application is permitted; however, the Group has not early adopted them in preparing these consolidated financial statements.

(a) K-IFRS No. 1116, '*Leases'*

K-IFRS No. 1116 introduces a comprehensive model for the identification of lease arrangements and accountings treatments for both lessors and lessees. K-IFRS No. 1116 will supersede the current lease guidance including K-IFRS No. 1017 Leases and the related interpretations when it becomes effective. The Group plans to apply K-IFRS No.1116 initially on January 1, 2019 using the modified retrospective approach. Therefore, the cumulative effect of adopting K-IFRS No.1116 will be recognized as an adjustment to the opening balance of retained earnings at January 1, 2019 with no restatement of comparative information.

K-IFRS No. 1116 distinguishes leases and service contracts on the basis of whether an identified asset is controlled by a customer. Distinctions of operating leases and finance leases are removed for lessee accounting, and is replaced by model where a right-of-use asset and corresponding liability have to be recognized for all leases by lessees except for short-term leases and leases of low value assets.

The right-of-use asset is initially measured at cost and subsequently measured at cost (subject to certain exceptions) less accumulated depreciation and impairment losses, adjusted for any remeasurement of the lease liability. The lease liability is initially measured at the present value of the lease payments that are not paid at that date. Subsequently, the lease liability is adjusted for interest and lease payments, as well as the impact of lease modifications, amongst others.

Furthermore, the classification of cash flows will also be affected as operating lease payments under K-IFRS No. 1017 are presented as operating cash flows; whereas under the K-IFRS No. 1116 model, the lease payments will be split into a principal and an interest portion which will be presented as financing and operating cash flows respectively.

In contrast to lessee accounting, K-IFRS No. 1116 substantially carries forward the lessor accounting requirements in K-IFRS No. 1017, and continues to require a lessor to classify a lease either as an operating lease or a finance lease.

As of December 31, 2018, the Group has non-cancellable operating lease commitments. A preliminary assessment indicates that these arrangements will meet the definition of a lease under K-IFRS No. 1116, and hence the Group will recognize a right-of-use asset and a corresponding liability in respect of all these leases unless they qualify for low value or short-term leases upon the application of K-IFRS No. 1116. The new requirement to recognize a right-of use asset and a related lease liability is expected to have a significant impact on the amounts recognized in the Group's consolidated financial statements and the Group is currently assessing its potential impact.

As of the end of reporting period, 1) for finance leases where the Group is a lessee and 2) for operating leases or finance leases where the Group is a lessor, it is unable to estimate the impact of the application of K-IFRS No. 1116 on the amounts recognized in the Group's financial statements.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective, Continued

(b) Other amendments
Management does not expect the following standards and interpretation will have a material impact on the Group's consolidated financial statement.

- K-IFRIC No. 2123 '*Uncertainty Over Income Tax Treatments*'
- K-IFRS No. 1109 '*Financial Instruments'* - Prepayment features with negative compensation
- K-IFRS No. 1028 '*Investment in Associates*' - Long-term Interests in Associates and Joint Ventures
- K-IFRS No. 1019 '*Employee Benefit*' – Plan Amendment, Curtailment or Settlement
- Annual Improvements to K-IFRS 2015-2017 Cycle
- Amendment of '*Conceptual Framework for Financial Reporting*'
- K-IFRS No. 1117 *'Insurance Contract'*

4. Geographic and Customer Information

The Group has a single reportable segment that is engaged in the manufacture and sale of semiconductor products. The management of the Group reviews the operation result of the semiconductor business for reporting information used and reviewed when establishing the Group's business strategy.

(1) The Group's non-current assets (excluding financial assets, loans and other receivables, equity-accounted investees and deferred tax assets) information by region based on the location of subsidiaries as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Korea	₩	32,768,811	23,959,991
China		5,100,869	2,768,494
Taiwan		6,309	5,752
Asia (other than China and Taiwan)		1,401	1,100
U.S.A.		376,307	318,567
Europe		9,908	8,560
	₩	38,263,605	27,062,464

(2) Revenue from customer A, B and C each constitutes more than 10% of the Group's consolidated revenue for the year ended December 31, 2018 amounts to ₩5,407,782 million, (2017: ₩3,690,504 million) ₩5,265,807 million (2017: ₩2,598,482 million) and ₩2,854,041 million (2017: ₩4,113,904 million), respectively.

5. Categories of Financial Instruments

(1) Categories of financial assets as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018		
	Financial assets at fair value through profit or loss	**Financial assets at amortized cost**	**Total**
Cash and cash equivalents	₩ -	2,349,319	2,349,319
Short-term financial instruments	-	523,579	523,579
Short-term investment assets	5,496,452	-	5,496,452
Trade receivables	-	6,319,994	6,319,994
Loans and other receivables	-	86,906	86,906
Other financial assets	-	310	310
Long-term investment assets	4,325,550	-	4,325,550
	₩ 9,822,002	9,280,108	19,102,110

(In millions of won)

	2017			
	Financial assets at fair value through profit or loss	**Available-for-sale financial assets**	**Loans and receivables**	**Total**
Cash and cash equivalents	₩ -	-	2,949,991	2,949,991
Short-term financial instruments[1]	-	-	4,674,862	4,674,862
Short-term investment asset[1]	929,801	-	-	929,801
Trade receivables	-	-	5,552,795	5,552,795
Loans and other receivables	-	-	80,023	80,023
Other financial assets	-	-	273	273
Long-term investment asset[1]	-	43,226	-	43,226
	₩ 929,801	43,226	13,257,944	14,230,971

[1] Short-term financial instruments and available-for-sale financial assets as of December 31, 2017 were reclassified to conform with the classification as of December 31, 2018.

5. Categories of Financial Instruments, Continued

(2) Categories of financial liabilities as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018
		Financial liabilities measured at amortized cost
Trade payables	₩	1,096,380
Other payables		3,681,933
Other non-trade payables		1,894,751
Borrowings		5,281,937
	₩	11,955,001

(In millions of won)

		2017
		Financial liabilities measured at amortized cost
Trade payables	₩	758,578
Other payables		2,724,547
Other non-trade payables		1,343,637
Borrowings		4,171,270
	₩	8,998,032

5. Categories of Financial Instruments, Continued

(3) Details of gain and loss on financial assets and liabilities by category for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017[1]
Financial assets at amortized cost			
Interest income	₩	62,478	54,275
Foreign exchange differences		573,349	(679,287)
Reversal of impairment		44	2,119
		635,871	(622,893)
Financial assets at fair value through profit or loss			
Dividend income		2,136	13
Gain on disposal		41,853	46,674
Gain on valuation		197,919	1,399
Foreign exchange differences		122,375	-
		364,283	48,086
Financial liabilities measured at amortized cost			
Interest expenses		(94,635)	(123,918)
Foreign exchange differences		(355,654)	447,707
		(450,289)	323,789
Financial liabilities at fair value through profit or loss			
Loss on transaction from derivative instruments		-	(11)
	₩	549,865	(251,029)

[1] Gain and loss on financial assets and liabilities for the year ended December 31, 2017 were reclassified to conform with the classification for the year ended December 31, 2018

6. Financial Risk Management

(1) Financial risk management

The Group's activities are exposed to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk 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 Group's financial performance.

Risk management is carried out by the Parent Company's corporate finance division in accordance with policies approved by the board of directors. The Parent Company's corporate finance division identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units. The board of directors provides 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 the investment of excess liquidity.

(a) Market risk

(i) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar, Euro and Japanese Yen. Foreign exchange risk arises from future commercial transactions; recognized assets and liabilities in foreign currencies; and net investments in foreign operations.

Monetary foreign currency assets and liabilities as of December 31, 2018 are as follows:

(In millions of won and millions of foreign currencies)

	Assets		Liabilities	
	Foreign currencies	Korean won equivalent	Foreign currencies	Korean won equivalent
USD	9,987	₩ 11,166,566	6,002	₩ 6,710,666
EUR	19	24,693	443	566,635
JPY	892	9,041	172,526	1,747,998

As of December 31, 2018, effects on profit before income tax as a result of change in exchange rate by 10% are as follows:

(In millions of won)

	If increased by 10%	If decreased by 10%
USD	₩ 445,590	(445,590)
EUR	(54,194)	54,194
JPY	(173,896)	173,896

6. Financial Risk Management, Continued

(1) Financial risk management, Continued

(a) Market risk, Continued

(ii) Interest rate risk

Interest rate risk of the Group is defined as the risk that the interest expenses arising from borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises through floating rate borrowings, and is partially offset by interests received from floating rate financial assets.

As of December 31, 2018, the Group is partially exposed to a risk of increase in interest rates. If interest rates on borrowings were 100 basis points higher/lower with all other variables held constant, profit before income tax for the following year would be ₩19,418 million (2017: ₩20,571 million) lower/higher, mainly as a result of higher/lower interest expense on floating rate borrowings and interest income on floating rate financial assets.

(iii) Price risk

The Group invests in equity and debt securities resulted from its business needs and the purpose of liquidity management. The Group's equity and debt securities are exposed to price risk as of December 31, 2018.

(b) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises mainly from operating and investing activities. In order to manage credit risk, the Group periodically evaluates the credit worthiness of each customer or counterparty through the analysis of its financial information, historical transaction records and other factors, based on which the Group establishes credit limits for each customer or counterparty.

(i) Trade and other receivables

For each new customer, the Group individually analyzes its credit worthiness before standard payment and delivery terms and conditions are offered. In addition, the Group is consistently managing trade and other receivables by reevaluating the overseas customer's credit worthiness and securing collaterals in order to limit its credit risk exposure.

The Group reviews at the end of each reporting period whether trade and other receivables are impaired and maintains credit insurance policies to manage credit risk exposure from oversea customers. The maximum exposure to credit risk as of December 31, 2018 is the carrying amount of trade and other receivables.

(ii) Other financial assets

Credit risk also arises from other financial assets such as cash and cash equivalents; short-term financial instruments; and deposits with banks and financial institutions as well as short-term and long-term loans mainly due to the bankruptcy of each counterparty to those financial assets. The maximum exposure to credit risk as of December 31, 2018 is the carrying amount of those financial assets. The Group transacts only with banks and financial institutions with high credit ratings, and accordingly management does not expect any significant losses from non-performance by these counterparties.

6. Financial Risk Management, Continued

(1) Financial risk management, Continued

(c) Liquidity risk

Liquidity risk is defined as the risk that the Group is unable to meet its short-term payment obligations on time due to deterioration of its business performance or inability to access financing. The Group forecasts its cash flow and liquidity status and sets action plans on a regular basis to manage liquidity risk proactively.

The Group invests surplus cash in interest-bearing current accounts, time deposits, and demand deposits, choosing instruments with appropriate maturities or sufficient liquidity to provide sufficient head-room as determined by the above-mentioned forecasts.

Contractual maturities of financial liabilities as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018				
		Less than 1 year	**1 - 2 years**	**2 - 5 years**	**More than 5 years**	**Total**
Borrowings[1]	₩	1,712,851	979,086	2,688,574	94,536	5,475,047
Finance lease liabilities		10,773	10,773	31,860	24,369	77,775
Trade payables		1,096,380	-	-	-	1,096,380
Other payables		3,681,933	-	-	-	3,681,933
Other non-trade payables		1,858,253	-	14,135	-	1,872,388
Financial guarantee contract		4	-	-	-	4
	₩	8,360,194	989,859	2,734,569	118,905	12,203,527

(In millions of won)

		2017				
		Less than 1 year	**1 - 2 years**	**2 - 5 years**	**More than 5 years**	**Total**
Borrowings[1]	₩	732,902	1,155,876	2,248,059	81,038	4,217,875
Finance lease liabilities		10,773	10,773	32,254	34,748	88,548
Trade payables		758,578	-	-	-	758,578
Other payables		2,724,885	-	-	-	2,724,885
Other non-trade payables		1,317,032	-	3,412	-	1,320,444
Financial guarantee contract		8	-	-	-	8
	₩	5,544,178	1,166,649	2,283,725	115,786	9,110,338

[1] The cash flow includes payment of interest under terms and conditions of borrowing contracts and excludes the amount of finance lease liabilities.

6. Financial Risk Management, Continued

(1) Financial risk management, Continued

(c) Liquidity risk, Continued

The table above analyzes the Group's non-derivative financial liabilities into relevant maturity groups based on the remaining period at the statement of financial position date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows and include estimated interest payments.

(2) Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends to shareholders, proceeds and repayments of borrowings, issue new shares or sell assets to reduce debt.

The debt-to-equity ratio and net borrowing ratio as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Total liabilities (A)	₩	16,806,004	11,597,545
Total equity (B)		46,852,331	33,820,919
Cash and cash equivalents; short-term financial instruments; and short-term investment asset (C)		8,369,350	8,554,654
Total borrowings (D)		5,281,937	4,171,270
Debt-to-equity ratio (A/B)		35.87%	34.29%
Net borrowing ratio (D-C)/B[1]		-	-

[1] Does not present net borrowing ratio as of December 31, 2018 and 2017 as the ratio was calculated as negative.

6. Financial Risk Management, Continued

(3) Fair value

Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in valuation techniques as follows:
- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

(a) The following table presents the carrying amounts and fair values of financial instruments by categories, including their levels in the fair value hierarchy, as of December 31, 2018 and 2017:

(In millions of won)

		2018			
	Carrying amounts	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value					
Short-term investment asset	₩ 5,496,452	-	5,496,452	-	5,496,452
Long-term investment asset	4,325,550	-	-	4,325,550	4,325,550
	9,822,002	-	5,496,452	4,325,550	9,822,002
Financial assets not measured at fair value					
Cash and cash equivalents[1]	2,349,319	-	-	-	-
Short-term financial instruments[1]	523,579	-	-	-	-
Trade receivables[1]	6,319,994	-	-	-	-
Loans and other receivables[1]	86,906	-	-	-	-
Other financial assets[1]	310	-	-	-	-
	9,280,108	-	-	-	-
Financial liabilities not measured at fair value					
Trade payables[1]	1,096,380	-	-	-	-
Other payables[1]	3,681,933	-	-	-	-
Other non-trade payables[1]	1,894,751	-	-	-	-
Borrowings	5,281,937	-	5,300,120	-	5,300,120
	₩ 11,955,001	-	5,300,120	-	5,300,120

[1] Does not include fair values of financial assets and liabilities of which fair values have not been measured as carrying amounts are reasonable approximation of fair values.

6. Financial Risk Management, Continued

(3) Fair value, Continued

(In millions of won)

		2017			
	Carrying amounts	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value					
Short-term investment asset	₩ 929,801	-	929,801	-	929,801
Long-term investment asset	43,226	-	-	43,226	43,226
	973,027	-	929,801	43,226	973,027
Financial assets not measured at fair value					
Cash and cash equivalents[1]	2,949,991	-	-	-	-
Short-term financial instruments[1]	4,674,862	-	-	-	-
Trade receivables[1]	5,552,795	-	-	-	-
Loans and other receivables[1]	80,023	-	-	-	-
Other financial assets[1]	273	-	-	-	-
	13,257,944	-	-	-	-
Financial liabilities not measured at fair value					
Trade payables[1]	758,578	-	-	-	-
Other payables[1]	2,724,547	-	-	-	-
Other non-trade payables[1]	1,343,637	-	-	-	-
Borrowings	4,171,270	-	4,178,598	-	4,178,598
	₩ 8,998,032	-	4,178,598	-	4,178,598

[1] Does not include fair values of financial assets and liabilities of which fair values have not been measured as carrying amounts are reasonable approximation of fair values.

6. Financial Risk Management, Continued

(3) Fair value, Continued

(b) Valuation Techniques
The valuation techniques of recurring and non-recurring fair value measurements and quoted prices classified as level 2 or level 3 are as follows:

(In millions of won)

		Fair value	Level	Valuation Techniques
Financial assets at fair value through profit or loss:				
Short-term investment assets	₩	5,496,452	2	Present value technique
Long-term investment assets		4,325,550	3	Present value technique and others

Long-term investments measured at level 3 in the fair value hierarchy include investments in special purpose companies of BCPE Pangea Intermediate Holdings Cayman, L.P. ("SPC1") amounting to ₩2,721,554 million and BCPE Pangea Cayman2 Limited ("SPC2") amounting to ₩1,461,451 million in connection with the acquisition of Toshiba Corporation's semiconductor memory business, or Toshiba Memory Corporation ("TMC") (see note 12). The fair value of the long-term investments is measured based on the equity value of the underlying asset, TMC, which is based on estimated future cash flows based on expected sales and cost structures, and discounted at weighted average capital costs, considering capital structures.

The fair value of equity investment in SPC1 is measured using probability-weighted expected return method that represents the probability-weighted average of possible future cash flows. The fair values of different scenarios (such as initial public offering, merger and acquisition, and liquidation) are determined using either market approach, option-pricing method or present value method based on the TMC's equity value. TMC's estimated equity value is allocated to shareholder's value of each class of shares depending the capital structure of the investment. For the allocation, a waterfall approach is used, which allocates value based on the distribution priority described in SPC1 investment agreement depending on the nature of liquidity transaction or an ultimate liquidation.

The fair value of debt investment in SPC2 convertible bonds is measured based on TMC's equity value, in combination of the value of debenture and the value of conversion right using binomial model.

6. Financial Risk Management, Continued

(3) Fair value, Continued

(b) Valuation Techniques, Continued

The valuation techniques and key inputs used in valuation of the equity investment in SPC1 and investment in SPC2 convertible bonds are as follows:

(In millions of won)

		Fair value	Valuation Techniques	Level 3 inputs	Input Range
Equity investment in SPC1	₩	2,721,554	Present value technique, probability-weighted expected return method, market approach, and option-pricing method	Terminal growth rate	0%
				Weighted-average capital cost	8.7%
				EV/EBITDA multiples	4.6 ~ 5.3
				Cost of equity	10.3%
SPC2 convertible bonds		1,461,451	Present value technique and binomial model	Terminal growth rate	0%
				Weighted-average capital cost	8.7%
				Volatility	18.4%
				Risk free rate	0.13%

In these level 3 significant unobservable inputs, an increase in terminal growth rate, EV/EBITDA multiples and control premium or a decrease in weighted-average capital cost, cost of equity and discount due to lack of marketability will result in higher fair value of the equity investment in SPC1. In addition, an increase in terminal growth rate and volatility and a decrease in weighted-average capital cost will result in higher fair value of the investment in SPC2 convertible bonds, while any change in risk free rate may have either positive or negative impact on the fair value of the investment in SPC2 convertible bonds.

Any positive or negative changes in the above inputs will have a direct impact on the fair value of investments in SPC1 and SPC2, respectively. They are significant, but unobservable. Accordingly, the investments are classified as fair value hierarchy level 3. The changes in these key inputs may have a significant impact on the fair value of investments in SPC1 and SPC2.

6. Financial Risk Management, Continued

(3) Fair value, Continued

(c) There was no transfer between fair value hierarchy levels for the year ended December 31, 2018 and the changes in financial assets classified as level 3 fair value measurements during the year ended December 31, 2018 are as follows:

(In millions of won)

	Beginning Balance[1]	Acquisition	Disposals	Gain on Valuation	Foreign Exchange Difference	Business Combination	Ending Balance
Long-term investment assets	₩ 43,226	4,012,799	(1,614)	181,179	87,246	2,714	4,325,550

[1] Beginning balance includes equity instruments amounting to ₩29,700 million which do not have quoted price in an active market for the identical instruments (inputs for level 1). Those are measured at cost in accordance with K-IFRS No. 1039, *'Financial Instrument: Recognition and Measurement'* as fair values of such equity instruments cannot be reliably measured using other valuation techniques as of December 31, 2018.

7. Restricted Financial Instruments

Details of restricted financial instruments as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017	Description
Short-term financial instruments	₩	227,500	227,500	Restricted for supporting small businesses
		6,079	5,695	Pledged for consumption tax
		-	1,287	Others
		233,579	234,482	
Other financial assets		11	11	Bank overdraft guarantee deposit
		265	262	Others
		276	273	
	₩	233,855	234,755	

8. Trade Receivables and Loans and Other Receivables

(1) Details of loans and other receivables as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Trade receivables	₩	6,209,165	5,453,848
Trade receivables to be collected from related parties		110,829	98,947
		6,319,994	5,552,795

(2) Details of loans and other receivables as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Current			
Other receivables	₩	8,465	10,816
Accrued income		3,899	22,308
Short-term loans		4,807	2,886
Short-term guarantee and other deposits		1,221	1,603
		18,392	37,613
Non-current			
Long-term other receivables		54	56
Long-term loans		28,125	11,098
Guarantee deposits		40,117	31,109
Other		218	147
		68,514	42,410
	₩	86,906	80,023

(3) Trade receivables and loans and other receivables, net of provision for impairment, as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018		
		Gross amount	Provision for impairment	Carrying amount
Trade receivables	₩	6,320,042	(48)	6,319,994
Current loans and other receivables		19,715	(1,323)	18,392
Non-current loans and other receivables		69,631	(1,117)	68,514
	₩	6,409,388	(2,488)	6,406,900

(In millions of won)

		2017		
		Gross amount	Provision for impairment	Carrying amount
Trade receivables	₩	5,552,841	(46)	5,552,795
Current loans and other receivables		38,940	(1,327)	37,613
Non-current loans and other receivables		43,497	(1,087)	42,410
	₩	5,635,278	(2,460)	5,632,818

8. Trade Receivables and Loans and Other Receivables, Continued

(4) Details of provision for impairment

Movements in the provision for impairment of trade receivables for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Beginning balance	₩	46	1,837
Reversal		(3)	(1,778)
Foreign exchange difference		-	(13)
Business combination		5	-
Ending balance	₩	48	46

Movements in the provision for impairment of current loans and other receivables for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Beginning balance	₩	1,327	1,371
Provision		-	32
Reversal		(4)	(85)
Foreign exchange difference		-	9
Ending balance	₩	1,323	1,327

Movements in the provision for impairment of non-current loans and other receivables for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Beginning balance	₩	1,087	1,476
Reversal		(37)	(297)
Foreign exchange difference		67	(92)
Ending balance	₩	1,117	1,087

8. Trade Receivables and Loans and Other Receivables, Continued

(5) The aging analyses of trade receivables and loans and other receivables as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018						
	Not impaired						
		Overdue					
	Not past due	Less than 3 months	Over 3 months and less than 6 months	Over 6 months	Impaired	Total
Trade receivables	₩ 6,320,038	-	-	-	4	6,320,042
Current loans and other receivables	18,392	-	-	-	1,323	19,715
Non-current loans and other receivables	68,514	-	-	-	1,117	69,631
	₩ 6,406,944	-	-	-	2,444	6,409,388

(In millions of won)

	2017						
	Not impaired						
		Overdue					
	Not past due	Less than 3 months	Over 3 months and less than 6 months	Over 6 months	Impaired	Total
Trade receivables	₩ 5,551,276	1,560	-	1	4	5,552,841
Current loans and other receivables	37,654	-	-	-	1,286	38,940
Non-current loans and other receivables	42,410	-	-	-	1,087	43,497
	₩ 5,631,340	1,560	-	1	2,377	5,635,278

9. Inventories

(1) Details of inventories as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018		
	Acquisition cost	**Inventory valuation allowance**	**Carrying amount**
Merchandise	₩ 1,648	(14)	1,634
Finished goods	1,532,188	(127,749)	1,404,439
Work-in-process	2,327,178	(208,197)	2,118,981
Raw materials	486,436	(24,894)	461,542
Supplies	433,017	(17,138)	415,879
Goods in transit	20,258	-	20,258
	₩ 4,800,725	(377,992)	4,422,733

(In millions of won)

	2017		
	Acquisition cost	**Inventory valuation allowance**	**Carrying amount**
Finished goods	₩ 544,978	(111,573)	433,405
Work-in-process	1,653,778	(36,889)	1,616,889
Raw materials	322,283	(26,031)	296,252
Supplies	278,422	(7,618)	270,804
Goods in transit	23,089	-	23,089
	₩ 2,822,550	(182,111)	2,640,439

(2) The amount of the inventories recognized as cost of sales and loss on valuation allowance of inventories charged to cost of sales for the years ended December 2018 and 2017 are as follows:

(In millions of won)

	2018	**2017**
Inventories recognized as cost of sales	₩ 15,178,673	12,700,702
Loss on valuation allowance of inventories	195,881	117,911

10. Other Current and Non-current Assets

Details of other current and non-current assets as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Current			
Advance payments	₩	113,030	34,887
Prepaid expenses		260,064	222,411
Value added tax refundable		343,821	263,287
Contract asset		24,294	-
Others		216	3,053
		741,425	523,638
Non-current			
Long-term advance payments		96,817	183,489
Long-term prepaid expenses		528,837	553,231
		625,654	736,720
	₩	1,367,079	1,260,358

11. Investments in Associates and Joint Ventures

(1) Details of investments in associates and joint ventures as of December 31, 2018 and 2017 are as follows:

(In millions of won)

				2018			2017	
Type	**Investee**	**Location**	**Business**	**Ownership (%)**	**Net asset value**	**Carrying amount**	**Ownership (%)**	**Carrying amount**
Associate	Stratio, Inc. [1]	U.S.A.	Development and manufacuring semiconductor	9.12	79	2,079	9.12	2,105
	SK China Company Limited [1]	China	Consulting and Investment	11.87	193,701	246,052	11.87	244,912
	Gemini Partners Pte. Ltd.	Singapore	Consulting	20.00	2,601	2,601	20.00	4,003
	TCL Fund[1]	Hong Kong	Investment	11.06	3,464	3,464	11.06	2,634
	SK South East Asia Investment Pte. Ltd.[2]	Singapore	Consulting and Investment	20.00	111,810	111,810	-	-
	Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)[3]	China	Venture Capital	46.30	3,241	3,241	-	-
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	China	Manufacturing semiconductor parts	45.00	109,708	109,708	45.00	106,210
	Hystars Semiconductor (Wuxi) Co., Ltd.[4]	China	Foundry Factory Construction	50.10	81,820	83,239	-	-
					506,424	562,194		359,864

[1] The Group is able to exercise significant influence through its right to appoint a director to the board of directors of each investee. Accordingly, the investments in these investees have been classified as associate.

[2] The Group acquired 20.00% shares in SK South East Asia Investment Pte. Ltd. during the year ended December 31, 2018. The investments have been classified as associate as the Group is able to exercise significant influence.

[3] The Group is able to exercise significant influence by SK hyix (Wuxi) Investment Ltd. acquiring 46.30% equity interest in Hushan Xinju (Chengdu) Venture Investment Center(Smartsource). Accordingly, the investments are classified as an associate.

[4] SK hynix system ic Inc. acquired 50.10% shares in Hystars Semiconductor (Wuxi) Co., Ltd. during year ended December 31, 2018. The Group classified it as joint venture because it only has joint control over the investee based on investment agreement.

11. Investments in Associates and Joint Ventures, Continued

(2) Changes in investments in associates and joint ventures for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018							
		Beginning balance	Acquisition	Disposal	Share of profit (loss)	Other equity movement	Dividend	Impairment	Ending balance
Stratio, Inc.	₩	2,105	-	-	(30)	4	-	-	2,079
SK China Company Limited		244,912	-	-	2,394	(1,254)	-	-	246,052
Gemini Partners Pte. Ltd.		4,003	-	-	256	37	-	(1,695)	2,601
TCL Fund		2,634	1,123	(254)	79	(31)	(87)	-	3,464
SK South East Asia Investment Pte. Ltd.		-	110,880	-	-	930	-	-	111,810
Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)		-	3,225	-	(14)	30	-	-	3,241
HITECH Semiconductor (Wuxi) Co., Ltd.		106,210	-	-	12,347	4,271	(13,120)	-	109,708
Hystars Semiconductor (Wuxi) Co., Ltd.		-	85,280	-	(330)	(1,711)	-	-	83,239
	₩	359,864	200,508	(254)	14,702	2,276	(13,207)	(1,695)	562,194

(In millions of won)

		2017					
		Beginning balance	Acquisition	Share of profit (loss)	Other equity movement	Dividend	Ending balance
Stratio, Inc.	₩	2,151	-	(30)	(16)	-	2,105
SK China Company Limited		-	257,169	-	(12,257)	-	244,912
Gemini Partners Pte. Ltd.		5,199	-	(1,084)	(112)	-	4,003
TCL Fund		2,219	526	16	(127)	-	2,634
HITECH Semiconductor (Wuxi) Co., Ltd.		121,447	-	13,465	(13,874)	(14,828)	106,210
	₩	131,016	257,695	12,367	(26,386)	(14,828)	359,864

11. Investments in Associates and Joint Ventures, Continued

(3) Associate and joint venture's statements of financial position as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018			
	Current assets	Non-current assets	Current liabilities	Non-current liabilities
Stratio, Inc.	₩ 403	617	159	-
SK China Company Limited	646,779	1,148,281	65,037	97,633
Gemini Partners Pte. Ltd.	5,357	7,649	-	-
TCL Fund	915	33,596	3,188	-
SK South East Asia Investment Pte. Ltd.	559,050	-	-	-
Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)	6,187	814	-	-
HITECH Semiconductor (Wuxi) Co., Ltd.	211,273	376,266	114,756	228,987
Hystars Semiconductor (Wuxi) Co., Ltd.	145,509	19,295	1,490	-

(In millions of won)

	2017			
	Current assets	Non-current assets	Current liabilities	Non-current liabilities
Stratio, Inc.	₩ 681	577	111	-
SK China Company Limited	812,882	934,872	54,752	70,213
Gemini Partners Pte. Ltd.	6,227	5,314	2	-
TCL Fund	7,863	15,957	-	-
HITECH Semiconductor (Wuxi) Co., Ltd.	192,905	334,678	79,725	211,835

(4) Associate and joint venture's statements of comprehensive income (loss) for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018		2017	
	Revenue	Profit (loss) for the period	Revenue	Profit (loss) for the period
Stratio, Inc.	₩ 88	(330)	33	(339)
SK China Company Limited	94,966	20,176	-	-
Gemini Partners Pte. Ltd.	-	1,279	183	(5,423)
TCL Fund	-	713	-	152
SK South East Asia Investment Pte. Ltd.	-	-	-	-
Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)	-	(31)	-	-
HITECH Semiconductor (Wuxi) Co., Ltd.	621,528	27,438	585,904	29,923
Hystars Semiconductor (Wuxi) Co., Ltd.	-	(658)	-	-

12. Long-term Investment Asset

(1) Details of long-term investment assets as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018			2017
	Ownership (%)/ Type	**Acquisition cost**	**Book value**	**Book value**
ProMOS Technologies Inc.	13.34 ₩	21,847	-	-
JNT Frontier Private Equity Unit	Certificate	684	684	684
Daishin Aju IB Investment Co., Ltd. Equity Unit	Certificate	453	453	483
Seoul Investment Early & Green Venture Fund	Certificate	1,180	1,180	1,513
TS 2011-4 Technology Transfer & Business Equity Unit	Certificate	144	144	318
L&S Venture Capital Equity Unit	Certificate	1,121	1,121	1,170
KTC-NP-Growth Equity Unit	Certificate	1,685	1,685	2,155
Intellectual Discovery, Ltd.	7.05	4,000	1,376	1,699
Semiconductor Growth Fund	Certificate	25,000	24,878	17,250
Exnodes Inc.	Convertible bond	716	716	716
Keyssa, Inc.	2.26	6,174	838	832
MEMS DRIVE, INC.	2.86	2,246	919	844
CHINA WALDEN VENTURE INVESTMENTS II, L.P.	Certificate	7,611	7,611	6,116
AutoTech Fund I, L.P.	Certificate	2,871	2,789	1,444
IMEC.XPAND COMM.VA	Certificate	1,607	1,607	1,607
RENO SUB-SYSTEM, INC.	2.68	2,246	226	204
NetSpeed Systems, Inc.[1]	-	-	-	558
CHINA WALDEN VENTURE INVESTMENTS III, L.P.	Certificate	3,470	3,487	-
TransLink Capital Partners IV, L.P.	Certificate	1,627	1,627	-
Impact Venture Capital I, LP	Certificate	2,199	2,707	-
BCPE Pangea Intermediate Holdings Cayman, L.P.[2]	Certificate	2,637,097	2,721,554	-
BCPE Pangea Cayman2 Limited[2]	Convertible bond	1,278,893	1,461,451	-
FemtoMetrix, Inc.	Convertible bond	3,209	3,209	-
TidalScale, Inc.	4.26	3,360	3,360	-
GigaIO Networks, Inc.	6.00	1,678	1,678	-
Aeye, Inc.	1.50	2,819	2,819	-
AutoTech Fund II, L.P.	Certificate	281	281	-
Nautilus Ventures Partners Fund II, L.P.	Certificate	1,118	1,118	-
Construction Guarnatee	0.01	709	779	709
Information & Communication Financial Cooperative	0.01	15	21	15
Beijing Starblaze Technology Co., Ltd.	5.43	3,273	3,255	3,273
Shanghai Natlinear Electronics Co., Ltd.	4.12	1,636	1,628	1,636
Shanghai IoT Phase II Venture Capital Fund Partnership, L.P.	Certificate	5,909	5,909	-

12. Long-term Investment Asset, Continued

(1) Details of long-term investment assets as of December 31, 2018 and 2017 are as follows, Continued:

(In millions of won)

	2018			2017
	Ownership (%)/ Type	**Acquisition cost**	**Book value**	**Book value**
Beijing Zettastone Technology Co., Ltd.	5.13	1,618	1,628	-
Beijing Horizon Robotics Technology Co., Ltd.	2.69	56,029	56,029	-
Shanghi Sirtus Microelectronics Technology Co., Ltd.	4.55	4,069	4,069	-
Mirae Aseet Social Enterprise Fund II	Certificate	275	275	-
Posco Social Enterprise Fund	Certificate	367	367	-
IBK Investment Securities, SE Fund I	Certificate	1,480	1,487	-
Shinhan AIM Social Enterprise Private Equity I	Certificate	600	585	-
		₩ 4,091,016	4,325,550	43,226

[1] The Group sold whole amount of NetSpeed Systems, Inc.'s preferred stock (book value of ₩558 million) and recognized the gain on disposal of long-term investment assets with amount of ₩5,255 million during the year ended December 31, 2018.

[2] In 2017, pursuant to the approval from the Board of Directors, the Group participated in a consortium that includes Bain Capital ("Bain Consortium") in connection with the acquisition of a stake in TMC. During the year ended December 31, 2018, the acquisition of TMC was completed and the Group made investment amounting to JPY 266,000 million in SPC1, which holds equity interests in TMC, as a limited partner and acquired convertible bonds of JPY 129,000 million issued by SPC2, which may be later convertible to 15% stake in TMC upon certain events. The Group does not control or have any significant influence on SPC1 or SPC 2 as its management and decision-making rights for SPC1 and SPC2 are limited. Accordingly, the investments in both SPC1 and SPC2 are accounted for as debt instruments and classified as financial assets measured at fair value through profit or loss.

(2) Changes in the carrying amount of long-term investment assets for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018	2017
Beginning balance	₩ 43,226	147,779
Acquisition	4,012,799	26,204
Disposal	(1,614)	(115,720)
Gain (loss) on valuation	181,179	(14,807)
Foreign exchange difference	87,246	(230)
Business combination	2,714	-
Ending balance	₩ 4,325,550	43,226

13. Property, Plant and Equipment

(1) Changes in property, plant and equipment for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018							
	Land	Buildings	Structures	Machinery	Vehicles	Others	Construction -in-progress	Total
Beginning net book amount	₩ 581,541	2,930,753	839,620	16,130,068	777	442,221	3,137,621	24,062,601
Changes during 2018								
Acquisitions	313,288	1,087,457	390,687	10,512,072	11,486	353,658	4,355,503	17,024,151
Receipt of government grants	-	(14,976)	-	-	(25)	-	-	(15,001)
Business combination	-	-	-	18	-	973	-	991
Disposals	-	(25,545)	(3,133)	(93,989)	-	(1,301)	(28,562)	(152,530)
Depreciation	-	(146,962)	(67,392)	(5,500,710)	(914)	(188,178)	-	(5,904,156)
Transfers[1]	124,356	707,556	124,659	1,619,073	-	15,823	(2,590,483)	984
Exchange differences and others	1,044	(8,336)	(2,625)	(24,034)	(9)	115	(30,578)	(64,423)
Ending net book amount	1,020,229	4,529,947	1,281,816	22,642,498	11,315	623,311	4,843,501	34,952,617
Acquisition cost	1,020,229	5,561,516	1,760,456	57,335,240	14,333	1,572,747	4,843,501	72,108,022
Accumulated depreciation	-	(992,088)	(459,536)	(34,524,095)	(2,997)	(949,408)	-	(36,928,124)
Accumulated impairment	-	(23,699)	(19,104)	(164,916)	-	(28)	-	(207,747)
Government grants	-	(15,782)	-	(3,731)	(21)	-	-	(19,534)
	₩ 1,020,229	4,529,947	1,281,816	22,642,498	11,315	623,311	4,843,501	34,952,617

[1] Investment property was transferred to property, plant and equipment during the year ended December 31, 2018.

13. Property, Plant and Equipment, Continued

(1) Changes in property, plant and equipment for the years ended December 31, 2018 and 2017 are as follows, Continued :

(In millions of won)

	2017							
	Land	Buildings	Structures	Machinery	Vehicles	Others	Construction -in-progress	Total
Beginning net book amount	₩ 575,755	2,514,376	516,145	13,196,508	1,041	435,643	1,537,934	18,777,402
Changes during 2017								
Acquisitions	7,950	216,035	279,553	6,642,678	117	161,007	2,980,042	10,287,382
Receipt of government grants	-	(1,000)	-	-	-	-	-	(1,000)
Disposals	(2,220)	(2,141)	(3,180)	(164,301)	(1)	(507)	(47,615)	(219,965)
Depreciation	-	(112,343)	(49,851)	(4,301,152)	(379)	(155,051)	-	(4,618,776)
Transfers	1,483	330,333	108,366	876,697	-	6,463	(1,323,342)	-
Exchange differences and others	(1,427)	(14,507)	(11,413)	(120,362)	(1)	(5,334)	(9,398)	(162,442)
Ending net book amount	581,541	2,930,753	839,620	16,130,068	777	442,221	3,137,621	24,062,601
Acquisition cost	581,541	3,807,324	1,262,928	46,463,886	3,081	1,217,216	3,137,621	56,473,597
Accumulated depreciation	-	(851,655)	(404,204)	(30,163,696)	(2,304)	(774,959)	-	(32,196,818)
Accumulated impairment	-	(23,699)	(19,104)	(165,509)	-	(35)	-	(208,347)
Government grants	-	(1,217)	-	(4,613)	-	(1)	-	(5,831)
	₩ 581,541	2,930,753	839,620	16,130,068	777	442,221	3,137,621	24,062,601

(2) Details of depreciation expense allocation for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018	2017
Cost of sales	₩ 5,421,324	4,213,339
Selling and administrative expenses	365,508	292,325
Other expenses	10,152	7,647
Development costs and other	107,172	105,465
	₩ 5,904,156	4,618,776

(3) Certain property, plant and equipment are pledged as collaterals for borrowings of the Group as of December 31, 2018 (see note 34).

(4) The Group capitalized borrowing costs amounting to ₩33,086 million (2017: ₩3,964 million) on qualifying assets during the year ended December 31, 2018. Borrowing costs were calculated using a capitalization rate of 3.08% (2017: 1.53%) for the year ended December 31, 2018.

13. Property, Plant and Equipment, Continued

(5) The Group leases certain machinery and others from Hansu Technical Service Ltd. and others under finance lease agreements.

The book value of the machinery and others subject to finance lease agreement amounted to ₩73,069 million as of December 31, 2018 (as of December 31, 2017: ₩79,161 million). The machinery and others are pledged as collateral for the finance lease liabilities.

The Group leases certain machinery and others from Macquarie Capital and others under operating lease agreements. The payment schedule of minimum lease payments under operating lease agreements as of December 31, 2018 is as follows:

(In millions of won)

		Minimum lease payments
No later than 1 year	₩	156,126
Later than 1 year		157,322
	₩	313,448

(6) Details of insured assets as of December 31, 2018 is as follows:

(In millions of won)

	Insured assets		Insured amount	Insurance Company
Package insurance	Property, plant and equipment; investment property; inventories; and business interruption	₩	80,875,070	Hyundai Marine & Fire Insurance Co., Ltd. and others
Fire insurance	Property, plant and equipment; investment property		91,760	
Erection all risks insurance	Property, plant and equipment		11,659,003	
		₩	92,625,833	

In addition to the assets stated above, vehicle and delivery equipment are insured by vehicle comprehensive insurance and liability insurance.

14. Intangible Assets

(1) Changes in intangible assets for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018				
	Goodwill	Industrial property rights	Development costs	Others	Total
Beginning net book amount	₩ 695,073	104,853	882,250	565,114	2,247,290
Changes during 2018					
Internal development	-	-	610,954	-	610,954
External acquisition	-	12,767	-	309,418	322,185
Disposals	-	(5,175)	-	(2,901)	(8,076)
Receipt of government grants	-	-	-	(2,080)	(2,080)
Business combination	3,207	-	-	22,539	25,746
Amortization	-	(16,380)	(334,766)	(172,949)	(524,095)
Impairment	-	-	(4,482)	-	(4,482)
Exchange differences	11,531	-	-	(203)	11,328
Ending net book amount	709,811	96,065	1,153,956	718,938	2,678,770
Acquisition cost	709,811	186,057	2,900,071	1,272,127	5,068,066
Accumulated amortization and impairment	-	(89,992)	(1,746,115)	(521,179)	(2,357,286)
Government grants	-	-	-	(32,010)	(32,010)
	₩ 709,811	96,065	1,153,956	718,938	2,678,770

(In millions of won)

	2017				
	Goodwill	Industrial property rights	Development costs	Others	Total
Beginning net book amount	₩ 730,204	98,963	629,882	456,542	1,915,591
Changes during 2017					
Internal development	-	-	511,647	-	511,647
External acquisition	-	26,572	-	246,692	273,264
Disposals	-	(4,872)	-	(1,076)	(5,948)
Amortization	-	(15,810)	(259,279)	(132,265)	(407,354)
Impairment	-	-	-	(769)	(769)
Exchange differences	(35,131)	-	-	(4,010)	(39,141)
Ending net book amount	695,073	104,853	882,250	565,114	2,247,290
Acquisition cost	695,073	184,971	2,293,388	950,432	4,123,864
Accumulated amortization and impairment	-	(80,118)	(1,411,138)	(354,424)	(1,845,680)
Government grants	-	-	-	(30,894)	(30,894)
	₩ 695,073	104,853	882,250	565,114	2,247,290

(2) Details of amortization expense allocation for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018	2017
Cost of sales	₩ 65,885	46,308
Selling and administrative expenses	456,269	360,183
Development costs	1,941	863
	₩ 524,095	407,354

14. Intangible Assets, Continued

(3) Goodwill impairment tests
Goodwill impairment tests are undertaken annually. As the Group has only one CGU, goodwill was allocated to one CGU. Recoverable amount of the CGU was determined based on fair value less costs to sell, which was determined using the current stock price as of December 31, 2018. No impairment loss of goodwill was recognized since the recoverable amount is higher than carrying value of the CGU as of December 31, 2018.

(4) Details of development costs

(a) Detailed criteria for capitalization of development costs
The Group's development projects for a new product proceeds in the process of review and planning phases (Phase 0 ~ 4) and product design and mass production phases (Phase 5 ~ 8). The Group recognizes expenditures incurred after Phase 4 in relation with the development for new technology is recognized as an intangible asset. Expenditures incurred at phase 0 through 4 are recognized as expenses.

(b) Development cost capitalized and expenses on research and development
Among costs associated with development activities, ₩610,954 million (2017: ₩511,647 million) that met capitalization criteria, were capitalized as development cost for the year ended December 31, 2018. In addition, costs associated with research activities and other development expenditures that did not meet the criteria in the amount of ₩2,284,000 million (2017: ₩1,975,386 million) were recognized as expenses for the year ended December 31, 2018.

(c) Details of development costs as of December 31, 2018 and 2017 are as follows:
(In millions of won)

	2018		
	Individual Asset	**Book value**	**Residual amortization period**
DRAM	1xnm B	₩ 112,681	7 months
	1ynm[1]	345,001	23 months
	1znm[2]	7,261	-
NAND	3D(72)	37,055	6 months
	3D(96)[2]	406,615	-
	3D(128)[2]	167,043	-
CIS	Hi-1333	4,298	13 months
	Hi-1336[2]	30,599	-
	Hi-1631[2]	43,403	-
		₩ 1,153,956	

[1] The name of development cost is changed from 1xynm to 1ynm during the year ended December 31, 2017.
[2] Amortization has not started as of December 31, 2018.

14. Intangible Assets, Continued

(4) Details of development costs, Continued

(c) Details of development costs as of December 31, 2018 and 2017 are as follows, Continued :

(In millions of won)

		2017	
	Individual Asset	**Book value**	**Residual amortization period**
DRAM	1xnm A	₩ 305,848	19 months
	1xynm[1]	192,260	-
NAND	F14	3,990	4 months
	3D(48)	42,343	9 months
	3D(72)[1]	111,164	18 months
	3D(96)[1]	186,488	-
	3D(128)[1]	8,635	-
CIS	Hi-1332	2,520	9 months
	Hi-1333[1]	7,695	-
	Hi-1336[1]	7,235	-
	Hi-1221[1]	3,431	-
	Hi-1631[1]	10,641	-
		₩ 882,250	

[1] Amortization has not started as of December 31, 2017.

(d) The Group recognizes ₩4,482 million as an impairment loss in development costs for the year ended December 31, 2018. Meanwhile, there is no impairment losses and reversals of impairment in development costs for the year ended December 31, 2017. There are no accumulated impairment losses in development costs as of December 31, 2018 and 2017 by writing off recognized impairment loss with acquisition cost.

15. Investment Property

(1) Changes in investment property for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Beginning net book amount	₩	2,468	2,573
Depreciation		(84)	(105)
Transfer[1]		(984)	-
Ending net book amount		1,400	2,468
Acquisition cost		2,911	5,170
Accumulated depreciation		(1,511)	(2,702)
	₩	1,400	2,468

[1] Investment property was transferred to property, plant and equipment during the year ended December 31, 2018.

(2) The depreciation expense of ₩84 million was charged to cost of sales for the year ended December 31, 2018 (2017: ₩105 million).

(3) Rental income from investment property during the year ended December 31, 2018 was ₩308 million (2017: ₩495 million).

16. Other Payables

Details of other payables as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Current			
Accrued expenses	₩	1,879,520	1,340,225
Non-current			
Rent deposits payable		14,135	3,412
Long-term accrued expenses		1,096	-
		15,231	3,412
	₩	1,894,751	1,343,637

17. Borrowings

(1) Details of borrowings as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Current			
Short-term borrowings	₩	585,788	192,686
Current portion of long-term borrowings		578,665	361,258
Current portion of debentures		449,850	219,836
		1,614,303	773,780
Non-current			
Long-term borrowings		2,161,566	2,080,333
Debentures		1,506,068	1,317,157
		3,667,634	3,397,490
	₩	5,281,937	4,171,270

(2) Details of short-term borrowings as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	Financial Institutions	Interest rate per annum in 2018 (%)		2018	2017
General borrowings	Shinhan Bank	3.76	₩	1,000	-
	Shinhan Bank	3.92		3,920	-
	The Export-Import Bank of Korea	-		-	107,140
	City Bank	3M USD LIBOR + 1.00		22,341	53,466
	Industrial & Commercial Bank of China	-		-	21,387
	China Bank	-		-	10,693
	China Development Bank	3M USD LIBOR + 1.50		558,527	-
			₩	585,788	192,686

17. Borrowings, Continued

(3) Details of long-term borrowings as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	Financial institutions	Interest rate per annum in 2018 (%)[1]		2018	2017
Local currency borrowings:					
Funds for equipment	Korea Development Bank	2.02~2.50	₩	500,000	500,000
Finance lease liabilities	Hansu Technical Service Ltd.	3.56~3.71		66,757	74,557
Funds for equipment	NongHyup Bank	1.00		1,248	1,170
Finance lease liabilities	Veolia Water Industrial Development Co., Ltd.	4.00		1,400	1,732
				569,405	577,459
Foreign currency borrowings:					
General borrowings	The Export-Import Bank of Korea	3M USD LIBOR + 1.00~1.40		978,233	910,690
		3M JPY LIBOR + 0.57		810,544	-
	Woori Bank	-		-	107,140
		3M USD LIBOR + 0.98		125,787	160,710
	China Bank	3M USD LIBOR + 1.70		7,484	-
Funds for equipment	Korea Development Bank	3M USD LIBOR + 1.15		55,905	107,140
		3M USD LIBOR + 0.95		125,787	160,710
		-		-	214,280
	KEB Hana Bank	3M USD LIBOR + 1.23		44,724	85,712
	NongHyup Bank	3M USD LIBOR + 1.33		22,362	64,284
	Standard Chartered Bank Korea Ltd.	-		-	53,466
				2,170,826	1,864,132
				2,740,231	2,441,591
Less: Current maturities				(578,665)	(361,258)
			₩	2,161,566	2,080,333

[1] As of December 31, 2018, the annual interest rates are as follows:

Type	Interest rate per annum as of December 31, 2018
3M USD LIBOR	2.80%
3M JPY LIBOR	-0.08%

17. Borrowings, Continued

(4) Details of debentures as of December 31, 2018 and 2017 are as follows:

(In millions of won)

	Maturity date	Interest rate per annum in 2018 (%)		2018	2017
Unsecured notes in local currency:					
212th	May 30, 2019	5.35	₩	450,000	450,000
214-1st	Aug. 26, 2020	2.27		210,000	210,000
214-2nd	Aug. 26, 2022	2.63		140,000	140,000
215-1st	Nov. 25, 2018	-		-	70,000
215-2nd	Nov. 25, 2020	2.56		100,000	100,000
215-3rd	Nov. 25, 2022	2.75		10,000	10,000
216-1st	Feb. 19, 2018	-		-	70,000
216-2nd	Feb. 19, 2021	2.22		180,000	180,000
216-3rd	Feb. 19, 2023	2.53		80,000	80,000
217-1st	May 27, 2018	-		-	80,000
217-2nd	May 27, 2021	2.30		150,000	150,000
218th	March 14, 2023	3.01		300,000	-
219-1st	August 27, 2023	2.48		250,000	-
219-2nd	August 27, 2025	2.67		90,000	-
				1,960,000	1,540,000
Less: Discounts on debentures				(4,082)	(3,007)
Current portion				(449,850)	(219,836)
			₩	1,506,068	1,317,157

(5) Finance lease liability

Lease liabilities are effectively secured as the rights to the leased asset belong to the lessor.

Details of future minimum lease payments to the lessor as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Total minimum lease payment			
No later than 1 year	₩	10,773	10,773
Between 1 and 5 years		42,633	43,027
Later than 5 years		24,369	34,748
		77,775	88,548
Discount on present value		(9,618)	(12,259)
Net minimum lease payment			
No later than 1 year		10,563	10,563
Between 1 and 5 years		38,218	38,550
Later than 5 years		19,376	27,176
	₩	68,157	76,289

18. Other Current and Non-current Liabilities

Details of other current and non-current liabilities as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Current			
Advance receipts	₩	8,973	3,040
Unearned income		186	81
Withholdings		49,770	39,862
Deposits received		1,036	989
Contract liabilities		80,373	-
Others		7,500	7,804
		147,838	51,776
Non-current			
Other long-term employee benefits		74,403	63,960
Long-term advance receipts		4,900	4,900
		79,303	68,860
	₩	227,141	120,636

19. Provisions

(1) Details of changes in provisions for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

	2018			
	Beginning balance	Increase	Utilization	Ending Balance
Warranty	₩ 3,807	8,848	(8,663)	3,992
Sales returns[1]	-	-	-	-
Legal claims	9,460	5,881	(9,460)	5,881
Emission allowances	37,412	8,923	-	46,335
	₩ 50,679	23,652	(18,123)	56,208

[1] Upon adoption of K-IFRS No. 1115, the amount expected to be incurred for future returns and the Group's right to collect the product from the customer have been recognized as other current liabilities and other current assets respectively.

(In millions of won)

	2017			
	Beginning balance	Increase	Utilization	Ending Balance
Warranty	₩ 2,997	7,682	(6,872)	3,807
Sales returns[1]	13,317	118,564	(101,209)	30,672
Legal claims	400	9,460	(400)	9,460
Emission allowances	26,108	11,999	(695)	37,412
	₩ 42,822	147,705	(109,176)	81,351

[1] The Group estimated the expected sales returns based on historical results and adjusts sales and cost of sales, respectively. Accordingly, related gross profit and estimated expenses related to the return (such as transportation costs) are recorded as provisions for sales returns.

(2) Provisions for warranty

The Group estimates the expected warranty costs based on historical results and accrues provisions for warranty.

(3) Provisions for legal claims

The Group recognizes provisions for legal claims when the Group has a present legal or constructive obligation as a result of past events and an outflow of resources required to settle the obligation is probable and the amount can be reliably estimated.

(4) Provision for emission allowances

The Group recognizes estimated future payment for the number of emission certificates required to settle the Group's obligation exceeding the actual number of certificates on hand as emission allowances according to the Act on Allocation and Trading of Greenhouse Gas Emission Permits.

20. Defined Benefit Liabilities

Under the defined benefit plan, the Group pays employee benefits to retired employees in the form of a lump sum based on their salaries and years of service at the time of their retirement. Accordingly, the Group is exposed to a variety of actuarial assumption risks such as risk associated with expected years of service, interest risk, and market (investment) risk.

(1) Details of defined benefit liabilities as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Present value of defined benefit obligations	₩	1,609,055	1,330,559
Fair value of plan assets		(1,608,832)	(1,337,848)
Net defined benefit liabilities (assets)	₩	223	(7,289)
Defined benefit liabilities		5,387	6,096
Defined benefit assets[1]		(5,164)	(13,385)

[1] The Parent Company and certain subsidiaries' fair value of plan assets in excess of the present value of defined benefit obligations amounted to ₩5,164 million and ₩13,385 million as of December 31, 2018 and 2017 is presented as defined benefit assets.

(2) Principal actuarial assumptions as of December 31, 2018 and 2017 are as follows:

	2018 (%)	2017 (%)
Discount rate for defined benefit obligations	2.64 ~ 3.78	3.81 ~ 4.35
Expected rate of salary increase	2.70 ~ 5.83	2.20 ~ 5.46

(3) Weighted average durations of defined benefit obligations as of December 31, 2018 and 2017 are 11.64 and 11.47 years, respectively.

(4) Changes in defined benefit obligations for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Beginning balance	₩	1,330,559	1,195,047
Current service cost		179,689	156,777
Interest cost		56,465	46,877
Transfer from associates		1,077	546
Remeasurements:		73,727	(23,406)
Demographic assumption		3,138	-
Financial assumption		102,639	(47,319)
Adjustment based on experience		(32,050)	23,913
Benefits paid		(36,798)	(45,241)
Business combination		4,300	-
Effect of movements in exchange rates		36	(41)
Ending balance	₩	1,609,055	1,330,559

20. Defined Benefit Liabilities, Continued

(5) Changes in plan assets for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Beginning balance	₩	1,337,848	888,559
Contributions		276,739	460,772
Interest income		56,651	34,880
Transfer from associates		1,837	550
Benefits paid		(34,768)	(27,383)
Business combination		3,009	-
Remeasurements		(32,484)	(19,530)
Ending balance	₩	1,608,832	1,337,848

(6) The amounts recognized in profit or loss for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Current service cost	₩	179,689	156,777
Net interest expense		(186)	11,997
	₩	179,503	168,774

(7) The amounts in which defined benefit plan related expenses are included for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Cost of sales	₩	101,944	95,301
Selling and administrative expenses		77,559	73,473
	₩	179,503	168,774

(8) Details of plan assets as of December 31, 2018 and December 31, 2017 are as follows:

(In millions of won)

		2018	2017
Deposits	₩	1,607,552	1,336,484
Other		1,280	1,364
	₩	1,608,832	1,337,848

Actual return on plan assets for the years ended December 31, 2018 and 2017 amounted to ₩24,167 million and ₩15,350 million, respectively.

20. Defined Benefit Liabilities, Continued

(9) As of December 31, 2018, the Group funded defined benefit obligations through insurance plans with Mirae Asset Life Insurance Co., Ltd. and other insurance companies. The Group's reasonable estimation of contribution to the plan assets for the year ending December 31, 2019 is ₩358,495 million under the assumption that the Group maintains the defined benefit plan.

(10) The sensitivity analysis of the defined benefit obligations as of December 31, 2018 to changes in the principal assumptions is as follows:

(In millions of won)

	Effects on defined benefit obligation	
	Increase of rate	**Decrease of rate**
Discount rate (if changed by 1%)	₩ (164,970)	194,258
Expected rate of salary increase (if changed by 1%)	193,911	(167,692)

The sensitivity analysis does not consider dispersion of all cash flows that are expected from the plan and provides approximate values of sensitivity for the assumptions used.

(11) Information about the maturity profile of the defined benefit obligation as of December 31, 2018 is as follows:

(In millions of won)

	2018				
	Less than 1 year	**1 - 5 years**	**5 - 10 years**	**10 - 20 years**	**Total**
Benefits paid	₩ 47,327	373,165	903,336	3,300,971	4,624,799

Information about the maturity profile is based on undiscounted amount of defined benefit obligation and classified to employee's expected years of remaining services.

(12) The Group adopted defined contribution plan for retirement benefit for employees subject to peak wage system. Contributions to defined contribution plans amounting to ₩216 million (2017: ₩76 million) was recognized as cost of sales for the year ended December 31, 2018.

21. Deferred Income Tax

(1) Changes in deferred income tax assets and liabilities for the years ended December 31, 2018 and 2017 without taking into consideration the offsetting of balances within the same tax jurisdiction, are as follows:

(In millions of won)

	2018				
	January 1, 2018	Profit or loss	Equity	Foreign exchange differences	December 31, 2018
Inventories, net	₩ 47,169	55,513	-	130	102,812
Property, plant and equipment, net	236,870	(96,703)	-	594	140,761
Defined benefits liabilities, net	416	(30,020)	29,182	(187)	(609)
Short-term and long-term investment assets and others	43,191	(76,175)	-	-	(32,984)
Employee benefits	34,166	5,785	-	3	39,954
Provisions	18,268	794	-	108	19,170
Other assets and other liabilities	14,743	9,840	-	-	24,583
Accrued expenses	13,641	35,242	-	-	48,883
Others	47,832	17,408	-	(8,587)	56,653
Deferred tax assets for temporary differences, net	456,296	(78,316)	29,182	(7,939)	399,223
Tax credit carryforwards recognized	7,813	6,693	-	684	15,190
Tax loss carryforwards recognized	130,120	(14,286)	-	7,172	123,006
Deferred tax assets recognized	₩ 594,229	(85,909)	29,182	(83)	537,419

(In millions of won)

	2017				
	January 1, 2017	Profit or loss	Equity	Foreign exchange differences	December 31, 2017
Inventories, net[1]	₩ 16,936	30,369	-	(152)	47,153
Property, plant and equipment, net [1]	30,023	215,639	-	(8,792)	236,870
Defined benefits liabilities, net	60,889	(59,344)	(1,114)	(15)	416
Short-term and long-term investment assets and others [1]	34,334	4,785	4,072	-	43,191
Employee benefits	28,671	5,490	-	(3)	34,158
Provisions[1]	11,582	19,237	-	(137)	30,682
Accrued expenses[1]	26,004	(12,363)	-	-	13,641
Others[1]	38,259	13,207	-	(1,505)	49,961
Deferred tax assets for temporary differences, net	246,698	217,020	2,958	(10,604)	456,072
Tax credit carryforwards recognized	360,131	(351,182)	-	(912)	8,037
Tax loss carryforwards recognized	180,807	(31,852)	-	(18,835)	130,120
Deferred tax assets recognized	₩ 787,636	(166,014)	2,958	(30,351)	594,229

[1] Inventories, property, plant and equipment, short-term and long-term investment assets, provisions, accrued expenses and others as of December 31, 2017 are reclassified to conform with the classification as of December 31, 2018.

21. Deferred Income Tax, Continued

(2) As of December 31, 2018, the deductible temporary differences that are not recognized as deferred tax assets (liabilities) are as follows:

(In millions of won)

		2018	2017
Investments in subsidiaries, associates, and joint ventures and others	₩	(5,139)	317,133
deductible temporary differences		17,756	60,511

22. Derivative Financial Instruments

(1) There was no derivative financial instruments as of December 31, 2018 and December 31, 2017.

(2) Details of gains and losses from derivative instruments for the year ended December 31, 2017 are as follows (2018: nil):

(In millions of won)

		2017			
		Gain on valuation	Loss on valuation	Gain on transaction	Loss on transaction
Interest rates swap	₩	-	-	902	913

23. Capital Stock, Capital Surplus and Other Equity

(1) The Parent Company has 9,000,000,000 authorized shares and the face value per share is ₩5,000 as of December 31, 2018. The number of shares issued, common stock, capital surplus and other capital as of December 31, 2018 and 2018, are as follows:

(In millions of won, thousands of shares)

		2018	2017
Issued shares[1]		731,530	731,530
Capital stock:			
Common stock	₩	3,657,652	3,657,652
Capital surplus:			
Additional paid in capital		3,625,797	3,625,797
Others		517,939	517,939
		4,143,736	4,143,736
Other equity:			
Acquisition cost of treasury shares		(2,508,427)	(771,913)
Stock option		1,976	813
	₩	(2,506,451)	(771,100)
Number of treasury shares		44,001	22,001

[1] As of December 31, 2018, total number of shares is 728,002 thousand shares, which differs from total issued shares due to the effect of stock retirement.

(2) The Group's number of outstanding shares is decreased to 684,002 thousand shares as of ended December 31,2018 due to acquisition of treasury shares.

24. Accumulated Other Comprehensive Loss

(1) Details of accumulated other comprehensive loss as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Equity-accounted investees – share of other comprehensive income (loss)	₩	(18,166)	(20,442)
Loss on valuation of available-for-sale financial asset[1]		-	(10,735)
Foreign operations – foreign currency translation differences		(464,653)	(471,087)
	₩	(482,819)	(502,264)

[1] Due to the application of K-IFRS No. 1109, available-for-sale financial assets for equity investments were reclassified to financial assets measured at financial assets at fair value through profit or loss. As a result of this reclassification, as at January 1, 2018, other comprehensive loss of ₩10,735 million was reclassified to retained earnings.

(2) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018			
		Beginning	Change	Effect of significant change in accounting policy	Ending
Equity-accounted investees – share of other comprehensive income (loss)	₩	(20,442)	2,276	-	(18,166)
Loss on valuation of long-term investment assets		(10,735)	-	10,735	-
Foreign operations – foreign currency translation differences		(471,087)	6,434	-	(464,653)
	₩	(502,264)	8,710	10,735	(482,819)

(In millions of won)

		2017		
		Beginning	Change	Ending
Equity-accounted investees – share of other comprehensive income (loss)	₩	5,944	(26,386)	(20,442)
Loss on valuation of available-for-sale financial assets		-	(10,735)	(10,735)
Foreign operations – foreign currency translation differences		(85,047)	(386,040)	(471,087)
	₩	(79,103)	(423,161)	(502,264)

25. Retained Earnings and Dividends

(1) Details of retained earnings as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Legal reserve[1]	₩	178,954	108,354
Discretionary reserve[2]		235,506	235,506
Unappropriated retained earnings		41,619,141	26,943,396
	₩	42,033,601	27,287,256

[1] The Commercial Code of the Republic of Korea requires the Parent Company to appropriate for each financial year, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued capital stock. The reserve is not available for cash dividends payment, but may be transferred to capital stock or used to reduce accumulated deficit.
[2] Discretionary reserve is a reserve for technology development.

(2) Dividends of the Parent Company

(a) Details of dividends for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won and In thousands of shares)

		2018	2017
Type of dividends		Cash Dividends	Cash Dividends
Outstanding ordinary shares		684,002	706,002
Par value (in won)	₩	5,000	5,000
Dividend rate		30%	20%
Total dividends	₩	1,026,003	706,002

(b) Dividend payout ratio for the years ended December 31, 2018 and 2017 is as follows:

(In millions of won)

		2018	2017
Dividends	₩	1,026,003	706,002
Profit attributable to owners of the Parent Company		15,540,111	10,641,512
Dividend payout ratio		6.60%	6.63%

(c) Dividend yield ratio for the years ended December 31, 2018 and 2017 is as follows:

(In won)

		2018	2017
Dividends per share	₩	1,500	1,000
Closing stock price		60,500	76,500
Dividend yield ratio		2.48%	1.31%

26. Revenue

The nature and impact on the Group of initial adopting the K-IFRS No. 1115 *'Revenue from contracts with customers'* are described in note 3-(26). Comparative information has not been restated to reflect the new requirement under the method of application of the standard.

(1) Details of the Group's revenue for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Sale of goods	₩	40,388,846	30,035,297
Providing services		56,220	74,137
	₩	40,445,066	30,109,434

(2) Details of the Group's revenue by product and service types for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
DRAM	₩	32,370,936	22,887,259
NAND Flash		7,420,857	6,648,748
Others		653,273	573,427
	₩	40,445,066	30,109,434

(3) The Group's revenue information by region based on the location of selling entities for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Korea	₩	840,491	1,207,464
China		15,785,993	10,074,686
Taiwan		2,950,067	2,626,577
Asia (other than China and Taiwan)		4,609,601	3,574,788
U.S.A.		14,278,161	11,063,503
Europe		1,980,753	1,562,416
	₩	40,445,066	30,109,434

(4) Details of the Group's revenue by the timing of revenue recognition are as follows:

(In millions of won)

		2018	2017
Performance obligations satisfied at a point in time	₩	40,388,846	30,035,297
Performance obligations satisfied over time		56,220	74,137
	₩	40,445,066	30,109,434

26. Revenue, Continued

(5) Revenue recognition policies and performance obligation

Revenue is measured based on promised consideration in a contract with a customer. The Group recognizes revenue when (or as) the Group transfers a promised good to a customer.

Revenue recognition policies regarding the nature and timing of performance obligations satisfaction, significant financing component in the contract are as follows:

	Nature of goods or services and timing of performance obligation satisfaction	Revenue recognition under K-IFRS No. 1115
Sale of goods	Revenue is recognized when (or as) goods are transferred to a customer and the customer obtains control of that asset, which is typically upon delivery or shipment depending on the terms of the contract. When the good is defective, the customer is granted the right to return the defective goods in exchange for a functioning product or cash.	Revenue is measured at the amount of consideration for the sale of goods, reflecting the expected amount of return estimated through historical information. The Group's right to recover products from customers on settling the refund liability is recognized as asset and refund liability is recognized as well. Settling a refund liability shall initially be measured by reference to the former carrying amount of the product less any expected costs to recover those products. Refund liability is included in other current liabilities (See note 18) and right to recover products from customers on settling the refund liability is included in other current assets (See note 10).The Group updates the measurement of the asset arising from changes in expectations about products to be returned at the end of each reporting period.

27. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Selling and administrative expenses:			
Salaries	₩	564,923	467,824
Defined benefit plan		27,200	25,841
Employee benefits		115,892	87,299
Commission		369,307	232,799
Depreciation		130,229	96,153
Amortization		442,389	348,519
Freight and custody charge		27,412	38,920
Legal cost		34,032	33,251
Rental		13,301	13,633
Taxes and dues		31,785	17,132
Training		32,636	27,105
Advertising		92,025	83,748
Utilities		11,603	14,480
Supplies		103,384	82,108
Repair		24,938	35,871
Travel and transportation		15,483	11,166
Sales promotion		64,837	57,180
Sales repair		6,243	7,682
Others		28,859	30,168
		2,136,478	1,710,879
Research and development:			
Expenditure on research and development		2,894,954	2,487,033
Development cost capitalized		(610,954)	(511,647)
		2,284,000	1,975,386
	₩	4,420,478	3,686,265

28. Expenses by Nature

Nature of expenses for the years ended December 31, 2018 and 2017 is as follows:

(In millions of won)

		2018	2017
Changes in finished goods and work-in-process	₩	(1,473,125)	(528,298)
Raw materials, supplies and consumables		5,659,357	4,257,017
Employee benefit		3,669,809	3,059,690
Depreciation and amortization		6,309,070	4,912,260
Royalty		172,615	221,789
Commission		1,675,122	1,254,084
Utilities		1,131,394	971,489
Repair		1,023,685	946,132
Outsourcing		1,072,241	895,996
Others		361,148	397,949
Total[1]	₩	19,601,316	16,388,108

[1] Total expenses consist of cost of sales and selling and administrative expenses.

29. Finance Income and Expenses

Finance income and expenses for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Finance income:			
Interest income	₩	62,478	54,275
Dividend income		2,136	13
Foreign exchange differences[1]		1,386,287	893,047
Gain from derivative instruments		-	902
Gain on valuation of short-term investment assets[2]		16,740	1,399
Gain on valuation of long-term investment assets[2]		182,461	-
Gain on disposal of short-term investment assets[2]		36,349	15,754
Gain on disposal of long-term investment assets[2]		5,504	31,078
		1,691,955	996,468
Finance expenses:			
Interest expenses		94,635	123,918
Foreign exchange differences[1]		1,046,217	1,124,628
Loss from derivative instruments		-	913
Loss on disposal of long-term investment asset		-	158
Loss on valuation of long-term investment asset		1,282	-
		1,142,134	1,249,617
Net finance income(expenses)	₩	549,821	(253,149)

[1] The foreign exchange differences of long-term investment assets amounting to ₩87,246 million are included.
[2] Gain(loss) related to investment assets for the year ended December 31, 2017 were reclassified to conform with the classification for the year ended December 31, 2018.

30. Other Income and Expenses

(1) Other income for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Gain on disposal of property, plant and equipment	₩	39,403	35,161
Gain on disposal of intangible asset		-	758
Others		73,407	41,963
	₩	112,810	77,882

(2) Other expenses for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Loss on disposal of property, plant and equipment	₩	59,738	10,229
Loss on disposal of intangible assets		5,545	4,872
Loss on disposal of trade receivables		9,031	7,049
Loss on impairment of intangible assets		4,483	769
Donations		62,041	76,195
Others		37,520	19,746
	₩	178,358	118,860

31. Income Tax Expense

(1) Income tax expense for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)		2018	2017
Current tax:			
Current tax on profits for the year	₩	5,728,798	2,687,405
Adjustments for the current tax liabilities attributable to prior year, but recognized in current year		(13,661)	(56,072)
		5,715,137	2,631,333
Deferred tax:			
Changes in net deferred tax assets		85,909	166,014
Income tax expense	₩	5,801,046	2,797,347

(2) The relationship between tax expense and accounting profit for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)		2018	2017
Profit before income tax	₩	21,341,029	13,439,566
Tax calculated at domestic tax rates applicable to profits in the respective countries		5,858,421	3,204,233
Tax effects of:			
Tax-exempt income		(39,732)	(157)
Non-deductible expenses		10,008	4,703
Change in unrecognized deferred tax assets		88,614	(113,829)
Tax credit		(137,671)	(126,213)
Adjustments for the current tax liabilities attributable to prior year, but recognized in current year		(13,661)	(56,072)
Others		35,067	(115,318)
Income tax expense	₩	5,801,046	2,797,347

(3) Income taxes recognized in other comprehensive income (loss) for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)		2018	2017
Remeasurements of defined benefit liabilities	₩	29,182	(1,114)
Gain on valuation of available-for-sale financial assets		-	4,072
	₩	29,182	2,958

32. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to ordinary shareholders of the Parent Company by the weighted average number of outstanding ordinary shares during the years.

(1) Basic earnings per share for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won, except for shares and per share information)

		2018	2017
Profit attributable to ordinary shareholders of the Parent Company	₩	15,540,111	10,641,512
Weighted average number of outstanding ordinary shares[1]		698,278,083	706,001,795
Basic earnings per share (in won)	₩	22,255	15,073

[1] Weighted average number of outstanding ordinary shares is calculated as follows:

(In shares)

	2018	2017
Outstanding ordinary shares	728,002,365	728,002,365
Acquisition of treasury shares	(29,724,282)	(22,000,570)
Weighted average number of outstanding ordinary shares	698,278,083	706,001,795

(2) Diluted earnings per share for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won, except for shares and per share information)

		2018	2017
Profit attributable to ordinary shareholders of the Parent Company	₩	15,540,111	10,641,512
Weighted average number of diluted outstanding ordinary shares[1]		698,364,251	706,038,232
Diluted earnings per share (in won)	₩	22,252	15,072

[1] Weighted average number of diluted ordinary shares outstanding is calculated as follows:

(In shares)

	2018	2017
Weighted average number of outstanding ordinary shares	698,278,083	706,001,795
Stock options	86,168	36,437
Weighted average number of diluted outstanding ordinary shares	698,364,251	706,038,232

33. Transactions with Related Parties and Others

(1) Details of related parties as of December 31, 2018 are as follows:

Type	Name of related parties
Associates	Stratio, Inc., SK China Company Limited, Gemini Partners Pte. Ltd., TCL Fund, SK South East Asia Investment Pte. Ltd., Hushan Xinju (Chengdu) Venture Investment Center(Smartsource)
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd., Hystars Semiconductor (Wuxi) Co., Ltd.
Other related parties	SK Telecom Co., Ltd., which has significant influence over the Group, SK Holdings Co., Ltd., which has control over SK Telecom Co., Ltd., and their subsidiaries

(2) Significant transactions for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018			
	Company	Operating revenue and others	Operating expense and others	Asset acquisition	Dividend income
Associates	SK China Company Limited	₩ -	9,699	-	-
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	3,442	621,986	1,901	13,120
	Hystars Semiconductor (Wuxi) Co., Ltd.	162	-	-	-
Other related parties	SK Telecom Co., Ltd.[1]	313	162,342	46,122	-
	SK Holdings Co., Ltd.[2]	1,465	231,180	539,447	-
	ESSENCORE Limited	917,320	-	-	-
	SK Engineering & Construction Co., Ltd.	4,038	25,882	2,484,366	-
	SK Energy Co., Ltd.	4,040	71,059	-	-
	SK Networks Co., Ltd.	-	7,190	10,600	-
	SKC Solmics Co., Ltd.	-	21,724	1,439	-
	Chungcheong energy service Co., Ltd.	-	19,112	203	-
	SK Materials Co., Ltd.	-	68,957	-	-
	SK Siltron Co., Ltd.	4,392	338,741	-	-
	Others	461	358,935	68,464	-
Other	Happynarae Co., Ltd.[3]	39	576,043	68,630	-
		₩ 935,672	2,512,850	3,221,172	13,120

[1] Operating expense and others include dividend payments of ₩146,100 million.
[2] For the year ended December 31, 2018, royalty paid for the use of the SK brand amounted to ₩61,955 million.
[3] The transactions are incurred before the acquisition of Happynarae Co., Ltd.

33. Transactions with Related Parties and Others, Continued

(2) Significant transactions for the years ended December 31, 2018 and 2017 are as follows, Continued:

(In millions of won)

		2017			
	Company	Operating revenue and others	Operating expense and others	Asset acquisition	Dividend income
Associates	SK China Company Limited	₩ -	5,836	-	-
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	5,782	582,745	-	14,828
Other related parties	SK Telecom Co., Ltd.[1]	318	96,441	24,183	-
	SK Holdings Co., Ltd.[2]	994	174,556	142,913	-
	ESSENCORE Limited	749,238	-	-	-
	SK Engineering & Construction Co., Ltd.	27,433	7,290	1,464,735	-
	SK Energy Co., Ltd.	5,075	54,682	-	-
	SK Networks Co., Ltd.	-	5,350	-	-
	SKC Solmics Co., Ltd.	-	30,486	1,020	-
	Chungcheong energy service Co., Ltd.	10	16,062	10	-
	SK Materials Co., Ltd.	3	50,657	-	-
	SK Siltron Co., Ltd.	1,538	84,791	-	-
	Others	667	166,867	29,787	-
Other	Happynarae Co., Ltd.[3]	34	455,632	36,516	-
		₩ 791,092	1,731,395	1,699,164	14,828

[1] Operating expense and others include dividend payments of ₩87,660 million.
[2] For the year ended December 31, 2017, royalty paid for the use of the SK brand amounted to ₩34,882 million.
[3] The transaction is incurred before Happynarae Co., Ltd. is included in a consolidation scope and the Group acquired control over the Happynarae Co., Ltd. during the year ended December 31, 2018.

33. Transactions with Related Parties and Others, Continued

(3) The balances of significant transactions as of December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	
	Company	Trade receivables and others	Other payables and others
Associates	SK China Company Limited	₩ 1	9,060
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	33	102,932
	Hystars Semiconductor (Wuxi) Co., Ltd.	19	-
Other related parties	SK Telecom Co., Ltd.	3,339	15,489
	SK Holdings Co., Ltd.	1,876	144,225
	ESSENCORE Limited	71,673	-
	SK Engineering & Construction Co., Ltd.	12,910	744,935
	SK Energy Co., Ltd.	5,350	9,005
	SK Networks Co., Ltd.	790	1,452
	SKC Solmics Co., Ltd.	57	8,113
	Chungcheong energy service Co., Ltd.	4	3,644
	SK Materials Co., Ltd.	443	18,214
	SK Siltron Co., Ltd. [1]	156,023	37,070
	Others	14,918	120,955
		₩ 267,436	1,215,094

(In millions of won)

		2017	
	Company	Trade receivables and others	Other payables and others
Associates	SK China Company Limited	₩ -	5,610
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	-	90,782
Other related parties	SK Telecom Co., Ltd.	94	3,014
	SK Holdings Co., Ltd.	5,530	108,038
	ESSENCORE Limited	90,367	-
	SK Engineering & Construction Co., Ltd.	7,327	946,517
	SK Energy Co., Ltd.	500	10,505
	SK Networks Co., Ltd.	-	1,395
	SKC Solmics Co., Ltd.	-	3,393
	Chungcheong energy service Co., Ltd.	11	2,128
	SK Materials Co., Ltd.	-	11,692
	SK Siltron Co., Ltd. [1]	150,521	21,071
	Others	90	93,433
Other	Happynarae Co., Ltd. [2]	3	55,126
		₩ 254,443	1,352,704

[1] The Group has paid ₩150,000 million in advance for the purchase of wafers during the year ended December 31, 2017 (See note 34).

[2] The transaction is incurred before Happynarae Co., Ltd. is included in a consolidation scope and the Group acquired control over the Happynarae Co., Ltd. during the year ended December 31, 2018.

33. Transactions with Related Parties and Others, Continued

(4) Key management compensation

Key management includes the Parent Company's directors, members of the board of directors, chief financial officer, and internal auditors. The compensation paid to key management for employee services for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

Details		2018	2017
Salaries	₩	106,408	106,291
Defined benefit plan related expenses		10,516	8,840
Share-based payment		1,163	813
Others		19	13
	₩	118,106	115,957

(5) The significant transactions between the Group and the companies that are in the same conglomerate group according to '*Fair Trade Law*' as of December 31, 2018 and 2017 are as follows. These entities are not related parties according to K-IFRS No. 1024, '*Related Party Disclosures*'.

(In millions of won)

			2018			
	Company		Operating revenue and others	Operating expense and others	Asset acquisition	Dividend income
Companies in the Conglomerate	SK Chemicals Co., Ltd.	₩	-	1,216	-	-
	SK Bioscience Co., Ltd.		-	125	-	-
		₩	-	1,341	-	-

(In millions of won)

			2017			
	Company		Operating revenue and others	Operating expense and others	Asset acquisition	Dividend income
Companies in the Conglomerate	SK Discovery Co., Ltd.	₩	-	1,204	-	-
	SK Chemicals Co., Ltd.		-	38	-	-
		₩	-	1,242	-	-

33. Transactions with Related Parties and Others, Continued

(6) The balances of significant transactions between the Group and the companies that are in the same conglomerate group designated by '*Fair Trade Law*'. The details of the balances as of December 31, 2018 and 2017 are as follows. These entities are not related parties according to K-IFRS No. 1024, '*Related Party Disclosures*'.

(In millions of won)

		2018	
	Company	Trade receivables and others	Other payables and others
Companies in the Conglomerate	SK Discovery Co., Ltd.	₩ 5	-
	SK Chemicals Co., Ltd.	1,253	331
	SK Bioscience Co., Ltd.	884	13
		₩ 2,142	344

(In millions of won)

		2017
	Company	Other payables and others
Companies in the Conglomerate	SK Discovery Co., Ltd.	₩ 339
	SK Chemicals Co., Ltd.	38
		₩ 377

(7) The Group's acquisitions of subsidiaries during the year ended December 31, 2018 are presented in note 1 and note 37 and the Group's acquisitions and additional interests in associates during the year ended December 31, 2018 are presented in note 11.

34. Commitments and Contingencies

(1) The details of litigations and claims of the Group as of December 31, 2018 are as follows:

(a) Lawsuit from Netlist, Inc.
Netlist, Inc. filed a lawsuit against the Parent Company and its subsidiaries including SK hynix America Inc. alleging infringement of multiple patents to U.S. District Court for the Central District of California, USA, on August 31, 2016 and June 14, 2017, to US International Trade Commission on September 1, 2016 and on October 31, 2017, to the German District court of Munich and the Beijing Intellectual Property Court, respectively on July 11, 2017. As of December 31, 2018, the patent infringement lawsuits filed by Netlist, Inc. in the U.S. have not been finalized and the final result cannot be predicted.

Meanwhile, the lawsuit filed to the U.S. International Trade Commission on September 1, 2016 was finalized on January 16, 2018 with the conclusion that the Parent Company and its subsidiaries did not infringe the patents of Netlist, Inc. Netlist, Inc. filed a petition on March 26, 2018.

In addition, regarding the lawsuit filed to the Beijing Intellectual Property Court on July 11, 2017, the Patent Reexamination Board ("PRB") determined that the patent was invalid on May 30, 2018. Accordingly, the patent infringement lawsuit was dismissed on June 26, 2018. Netlist, Inc. did not appeal PRB's decision that invalidated the patent and the decision was finalized.

In addition, regarding the lawsuit filed to the German District court of Munich on July 11, 2017, the Court determined that the Group did not infringe the patent litigation of Netlist, Inc. on January 31, 2019.

(b) Price-fixing class-action lawsuits in North America
On April 27, 2018, a purported class-action lawsuit was filed against the Parent Company and its subsidiary, SK hynix America Inc. in the U.S. District Court for the Northern District of California asserting claims based on alleged price-fixing of DRAM products during the period from June 1, 2016 to February 1, 2018. Similar lawsuits were subsequently filed in federal court in the U.S., as well as in Canadian courts in British Columbia, Quebec and Ontario. As of December 31, 2018, the lawsuits filed have not been finalized and the Group is unable to predict the outcome of these matters and therefore cannot estimate the range of possible loss.

(c) The antitrust investigation in China
The State Administration for Market Regulation of China initiated to investigate the violation of the antitrust law regarding on primary DRAM businesses' sales in China in May 2018. The pending case currently is under investigation. As of December 31, 2018, the Group is are unable to predict the outcome of these matters and therefore cannot estimate the range of possible loss.

(d) Other patent infringement claims and litigation
In addition to the above litigations, the Group has responded to various disputes related to intellectual property rights and has recognized a liability when it represents a present obligation as a result of past event and is probable that an outflow of resources will arise and a loss can be reliably estimated.

(2) Technology and patent license agreements
The Group has entered into a number of patent license agreements with several companies. The related royalties are paid on a lump-sum or running basis in accordance with the respective agreements. The lump-sum royalties are expensed over the contract period using the straight-line method.

(3) Contract for supply of industrial water
The Group has entered into a new contract with Veolia Water Industrial Development Co., Ltd. ("Veolia") under which the Group purchases industrial water from Veolia during period of June, 2018 through May, 2023. According to the contract, the Group is obligated to pay base service charges, which are predetermined and additional service charges which are variable according to the amount of water used.

34. Commitments and Contingencies, Continued

(4) Post- process service contract with HITECH Semiconductor (Wuxi) Co., Ltd.(HITECH)
The Group has entered into an agreement with HITECH to be provided with post-process service by HITECH. The conditions of the service provided includes package, package test, modules and others. According to the agreement, the Group is liable to guarantee a certain level of margin to HITECH.

(5) Assets provided as collateral

Details of assets provided as collateral as of December 31, 2018 are as follows:

(In millions of won)

	Book value	Pledged amount	Remark
Land	₩ 1,260		
Buildings	6,779	941,284	Borrowings for equipment and others
Machinery	599,550		
	₩ 607,589	941,284	

Other than the above assets provided as collateral, the finance lease assets of the Group are pledged as collateral for the finance lease liabilities in accordance with the finance lease contracts.

(6) Financing agreements

Details of credit lines with financial institutions as of December 31, 2018 are as follows:

(In millions of won and millions of foreign currencies)

	Financial Institution	Commitment	Currency	Amount
The Parent Company	KEB Hana Bank and others	Import finance including usance	USD	225
		Export finance including bills bought	USD	50
		Comprehensive limit contract for import and export	USD	960
		Accounts receivable factoring contracts which have no right to recourse	KRW	140,000
SK hynix Semiconductor (China) Ltd.	Agricultural Bank of China and others	Import finance including usance	RMB	1,548
			USD	392
SK hynix America Inc. and other sales entities	Citibank and others	Accounts receivable factoring contracts which have no right to recourse	USD	249
Domestic subsidiaries	KEB Hana Bank and others	Import finance including usance	USD	45
		Finance secured by accounts receivable	KRW	46,000
		Agent agreement for payment of goods received	KRW	12,500

34. Commitments and Contingencies, Continued

(7) Details of guarantees provided to others as of December 31, 2018 are as follows:

(In millions of won)

		Amount	Remark
Employees	₩	4	Guarantees for employees' borrowings relating to employee stock ownership

(8) Capital commitments
The Group's unrecorded commitments in relation to the capital expenditures on property, plant and equipment as of December 31, 2018 and 2017 are ₩1,857,092 million and ₩661,588 million, respectively.

(9) Long-term purchase agreement for raw materials
The Group has entered into a procurement agreement with SK Siltron Co., Ltd. from 2019 to 2023 for stable supply of wafer with an advanced payment of ₩150,000 million during the year ended December 31, 2017. In addition, SK Siltron Co., Ltd. has committed to provide certain portion of its investment assets as collateral to secure the advanced payment of ₩150,000 million prepaid by the Group.

(10) Investment in TMC

In regards to the Group's interests in TMC through its investments in SPC1 and SPC2, equity shares in TMC owned, directly or indirectly, by the Group are limited to a certain percentage during certain periods after the date of acquisition. In addition, during the periods, the Group does not have the right in appointing TMC's directors and is unable to exercise significant influence over decision-making for TMC's operation and management.

35. Statements of Cash Flows

(1) Reconciliations between profit for the year and net cash inflow from operating activities for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Profit for the year	₩	15,539,984	10,642,219
Adjustment			
Income tax expense		5,801,046	2,797,347
Defined benefit plan		179,503	168,774
Depreciation		5,904,156	4,618,776
Depreciation of investment property		84	105
Amortization		524,095	407,354
Share-based compensation expenses		1,163	813
Loss on disposal of property, plant and equipment		59,738	10,229
Loss on disposal of intangible assets		5,545	4,872
Loss on impairment of intangible assets		4,483	769
Loss on valuation of long-term investment asset		1,282	-
Interest expense		94,635	123,918
Loss on foreign currency translation		181,210	246,316
Gain on equity method investments, net		(14,702)	(12,367)
Gain on disposal of property, plant and equipment		(39,403)	(35,161)
Gain on disposal of intangible assets		-	(758)
Gain on valuation of short-term investment assets		(16,740)	(1,399)
Gain on disposal of short-term investment assets		(36,349)	(15,754)
Gain on valuation of long-term investment assets		(182,461)	-
Gain on disposal of long-term investment assets		(5,504)	(31,078)
Loss on derivative instruments, net		-	11
Interest income		(62,478)	(54,275)
Gain on foreign currency translation		(126,094)	(310,978)
Impairment loss on associate investment		1,695	-
Others, net		7,047	3,664
Changes in operating assets and liabilities			
Increase in trade receivables		(547,255)	(2,964,272)
Decrease (increase) in loans and other receivables		38,102	(36,541)
Increase in inventories		(1,782,384)	(634,623)
Increase in other assets		(98,632)	(302,967)
Decrease in trade payables		58,773	514,751
Increase in other payables		(16,161)	(110)
Decrease in other non-trade payables		542,437	666,770
Increase (decrease) in provisions		(25,183)	38,860
Increase in other liabilities		118,986	4,081
Payment of defined benefit liabilities		(8,862)	(15,313)
Contributions to plan assets		(276,739)	(460,772)
Cash generated from operating activities	₩	25,825,017	15,373,261

35. Statements of Cash Flows, Continued

(2) Details of significant transactions without inflows and outflows of cash for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
In-kind investment for SK China Company Limited	₩	-	143,209
Increase in other payables related to acquisition of property, plant and equipment		954,918	1,154,195
Transfer of investment property to property, plant and equipment		984	-

(3) Changes in liabilities arising from financial activities for the years ended December 31, 2018 and 2017 are as follows:

(In millions of won)

		2018	2017
Beginning balance	₩	4,171,270	4,335,978
Cash flows from financing activities			
Proceeds from borrowings		3,125,721	782,329
Repayments of borrowings		(2,078,522)	(710,635)
Foreign currency differences		61,857	(238,112)
Present value discount (interest expense)		1,611	1,710
Ending balance	₩	5,281,937	4,171,270

36. Share-based payment

(1) The Group granted equity-settled stock options to the Group's key management during the year ended December 31, 2018 and the stock options as of December 31, 2018 are as follows:

(In shares)

	Total numbers of share option granted	Exercised	Forfeited or Cancelled	Outstanding at December 31, 2018
1st	99,600	-	-	99,600
2nd	99,600	-	-	99,600
3rd	99,600	-	-	99,600
4th	7,747	-	-	7,747
5th	7,223	-	-	7,223
	313,770	-	-	313,770

	Grant date	Service Period for Vesting	Exercisable Period	Exercise price (in won)
1st	March 24, 2017	March 24, 2017 - March 24, 2019	March 25, 2019 - March 24, 2022	48,400
2nd	March 24, 2017	March 24, 2017 - March 24, 2020	March 25, 2020 - March 24, 2023	52,280
3rd	March 24, 2017	March 24, 2017 - March 24, 2021	March 25, 2021 - March 24, 2024	56,460
4th	January 01, 2018	January 1, 2018 - December 31, 2019	January 1, 2020 - December 31, 2022	77,440
5th	March 28, 2018	March 28, 2018 - March 28, 2020	March 29, 2020 - March 28 2023	83,060

(2) Measurement of fair value

The compensation cost is calculated by applying a binomial option-pricing model in estimating the fair value of the option at grant date. The inputs used are as follows:

	1st	2nd	3rd	4th	5th
Expected volatility	23.23%	23.23%	23.23%	22.50%	25.30%
Estimated fair value of share option (in won)	10,026	9,613	9,296	16,687	18,362
Dividend yield ratio	1.20%	1.20%	1.20%	0.78%	1.23%
Risk free ratio	1.86%	1.95%	2.07%	2.38%	2.46%

(3) The compensation expense for the year ended December 31, 2018 was ₩1,163 million (2017: ₩ 813 million).

37. Business Combination

(1) The Group acquired control over Happynarae Co., Ltd. and its subsidiaries as of December 28, 2018 by purchasing 100% share of Happynarae Co., Ltd. to increase effectiveness of procurement process and creating social value. The Group paid amount of ₩63,147 million in cash as transferred consideration and the amount of ₩3,208 million is recognized as goodwill.

(2) Detail of consideration paid, fair value of acquired assets and assumed liabilities are as follows:

(In millions of won)

		2018
Consideration paid		
Cash and cash equivalents	₩	63,147
Recognized assets and liabilities		
Cash and cash equivalents		29,817
Short-term financial instruments		23,000
Trade receivables, and other receivables net		129,649
Inventories, net		1,634
Long-term investment assets		2,714
Property, plant and equipment, net		991
Intangible assets, net		22,539
Other asset		6,164
Trade payables and other payables		(143,804)
Deferred tax liabilities		(4,646)
Current tax liabilities		(3,427)
Defined benefit liabilities, net		(1,291)
Other liabilities		(3,401)
Identifiable net asset		59,939
Goodwill	₩	3,208

Independent Auditors' Report

The Board of Directors and Shareholders
SK hynix, Inc.:

We have audited the accompanying consolidated financial statements of SK hynix, Inc. and its subsidiaries (the "Group") which comprise the consolidated statements of financial position as of December 31, 2017 and 2016, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility
Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility
Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Korean Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2017 and 2016 and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

Other Matter
The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

/s/ KPMG Samjong Accounting Corp.

Seoul, Korea
February 14, 2018

This report is effective as of February 14 , 2018, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes there to. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

SK HYNIX, INC. and Subsidiaries
Consolidated Statements of Financial Position
As of December 31, 2017 and 2016

(In millions of won)

	Note		2017	2016
Assets				
Current assets				
Cash and cash equivalents	*5,6*	₩	2,949,991	613,786
Short-term financial instruments	*5,6,7*		5,604,663	3,521,893
Trade receivables, net	*5,6,8,31*		5,552,795	3,251,652
Loans and other receivables, net	*5,6,8,31*		37,613	25,611
Inventories, net	*9*		2,640,439	2,026,198
Current tax assets	*29*		1,305	489
Other current assets	*10*		523,638	399,353
			17,310,444	9,838,982
Non-current assets				
Investments in associates and joint ventures	*11*		359,864	131,016
Available-for-sale financial assets	*5,6,12*		43,226	147,779
Loans and other receivables, net	*5,6,8,31*		42,410	39,490
Other financial assets	*5,6,7*		273	423
Property, plant and equipment, net	*13,32*		24,062,601	18,777,402
Intangible assets, net	*14,28*		2,247,290	1,915,591
Investment property, net	*13,15*		2,468	2,573
Deferred tax assets	*20,29*		599,783	792,368
Employee benefit assets	*19*		13,385	-
Other non-current assets	*10*		736,720	570,402
			28,108,020	22,377,044
Total assets		₩	45,418,464	32,216,026

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries
Consolidated Statements of Financial Position, Continued
As of December 31, 2017 and 2016

(In millions of won)

	Note		2017	2016
Liabilities				
Current liabilities				
Trade payables	*5,6*	₩	758,578	696,144
Other payables	*5,6,31*		2,724,547	1,606,417
Other non-trade payables	*5,6*		1,340,225	685,154
Borrowings	*5,6,16,31*		773,780	704,860
Other financial liabilities	*5,6,21*		-	288
Provisions	*18,32*		81,351	42,822
Current tax liabilities	*29*		2,385,876	374,666
Other current liabilities	*17*		51,776	50,498
			8,116,133	4,160,849
Non-current liabilities				
Other non-trade payables	*5,6*		3,412	27,426
Borrowings	*5,6,16,31*		3,397,490	3,631,118
Defined benefit liabilities, net	*19*		6,096	306,488
Deferred tax liabilities	*20*		5,554	4,732
Other non-current liabilities	*17*		68,860	61,883
			3,481,412	4,031,647
Total liabilities			11,597,545	8,192,496
Equity				
Equity attributable to owners of the Parent Company				
Capital stock	*1,22*		3,657,652	3,657,652
Capital surplus	*22*		4,143,736	4,143,736
Other equity	*22*		(771,100)	(771,913)
Accumulated other comprehensive loss	*23*		(502,264)	(79,103)
Retained earnings	*24*		27,287,256	17,066,583
Total equity attributable to owners of the Parent Company			33,815,280	24,016,955
Non-controlling interests			5,639	6,575
Total equity			33,820,919	24,023,530
Total liabilities and equity		₩	45,418,464	32,216,026

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries

Consolidated Statements of Comprehensive Income

For the years ended December 31, 2017 and 2016

(In millions of won, except per share information)

	Note		2017	2016
Revenue	*4,31*	₩	30,109,434	17,197,975
Cost of sales	*26,31*		12,701,843	10,787,139
Gross profit			17,407,591	6,410,836
Selling and administrative expense	*25,26*		3,686,265	3,134,090
Operating profit			13,721,326	3,276,746
Finance income	*27*		996,468	814,892
Finance expenses	*27*		1,249,617	846,328
Share of profit of equity-accounted investees	*11*		12,367	22,752
Other income	*28*		77,882	52,371
Other expenses	*28*		118,860	103,979
Profit before income tax			13,439,566	3,216,454
Income tax expense	*29*		2,797,347	255,971
Profit for the year			10,642,219	2,960,483
Other comprehensive income (loss)				
Item that will never be reclassified to profit or loss:				
Remeasurements of defined benefit liability, net of tax	*19*		2,762	106,822
Items that are or may be reclassified to profit or loss:				
Foreign operations – foreign currency translation differences, net of tax	*23*		(387,683)	(82,066)
Loss on valuation of available-for-sale financial assets, net of tax	*12,29*		(10,735)	-
Equity-accounted investees – share of other comprehensive income(loss), net of tax	*11,23*		(26,386)	4,088
Other comprehensive income (loss) for the year, net of tax			(422,042)	28,844
Total comprehensive income for the year		₩	10,220,177	2,989,327
Profit attributable to:				
Owners of the Parent Company		₩	10,641,512	2,953,774
Non-controlling interests			707	6,709
Total comprehensive income (loss) attributable to:				
Owners of the Parent Company			10,221,113	2,982,703
Non-controlling interests			(936)	6,624
Earnings per share	*30*			
Basic earnings per share (in won)			15,073	4,184
Diluted earnings per share (in won)			15,072	4,184

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries

Consolidated Statements of Changes in Equity

For the years ended December 31, 2017 and 2016

(In millions of won)

	Note		Attributable to owners of the Parent Company						Non-controlling interests	Total equity
			Capital stock	Capital surplus	Other equity	Accumulated other comprehensive income (loss)	Retained earnings	Total		
Balance at January 1, 2016		₩	3,657,652	4,143,736	(771,913)	(1,600)	14,358,988	21,386,863	840	21,387,703
Total comprehensive income										
Profit for the year			-	-	-	-	2,953,774	2,953,774	6,709	2,960,483
Remeasurements of defined benefit liability, net of tax	*19*		-	-	-	-	106,822	106,822	-	106,822
Other comprehensive income from joint venture and associate, net of tax	*11,23*		-	-	-	4,088	-	4,088	-	4,088
Foreign currency translation differences for foreign operations, net of tax	*23*		-	-	-	(81,981)	-	(81,981)	(85)	(82,066)
Total comprehensive income			-	-	-	(77,893)	3,060,596	2,982,703	6,624	2,989,327
Transactions with owners of the Parent Company										
Dividends paid			-	-	-	-	(353,001)	(353,001)	-	(353,001)
Disposal of a subsidiary			-	-	-	390	-	390	(889)	(499)
Total transactions with owners of the Parent Company			-	-	-	390	(353,001)	(352,611)	(889)	(353,500)
Balance at December 31, 2016		₩	3,657,652	4,143,736	(771,913)	(79,103)	17,066,583	24,016,955	6,575	24,023,530

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries
Consolidated Statements of Changes in Equity, Continued
For the years ended December 31, 2017 and 2016

(In millions of won)

		Attributable to owners of the Parent Company							
	Note	**Capital stock**	**Capital surplus**	**Other equity**	**Accumulated other comprehensive income (loss)**	**Retained earnings**	**Total**	**Non-controlling interests**	**Total equity**
Balance at January 1, 2017		₩ 3,657,652	4,143,736	(771,913)	(79,103)	17,066,583	24,016,955	6,575	24,023,530
Total comprehensive income									
Profit for the year		-	-	-	-	10,641,512	10,641,512	707	10,642,219
Remeasurements of defined benefit liability, net of tax	*19*	-	-	-	-	2,762	2,762	-	2,762
Loss on valuation of available-for-sale financial assets	*12,23*	-	-	-	(10,735)	-	(10,735)	-	(10,735)
Other comprehensive income from joint venture and associate, net of tax	*11,23*	-	-	-	(26,386)	-	(26,386)	-	(26,386)
Foreign currency translation differences for foreign operations, net of tax	*23*	-	-	-	(386,040)	-	(386,040)	(1,643)	(387,683)
Total comprehensive income		-	-	-	(423,161)	10,644,274	10,221,113	(936)	10,220,177
Transactions with owners of the Parent Company									
Dividends paid	*24*	-	-	-	-	(423,601)	(423,601)	-	(423,601)
Share-based payment transaction		-	-	813	-	-	813	-	813
Total transactions with owners of the Parent Company		-	-	813	-	(423,601)	(422,788)	-	(422,788)
Balance at December 31, 2017		₩ 3,657,652	4,143,736	(771,100)	(502,264)	27,287,256	33,815,280	5,639	33,820,919

See accompanying notes to the consolidated financial statements.

SK HYNIX, INC. and Subsidiaries
Consolidated Statements of Cash Flows
For the years ended December 31, 2017 and 2016

(In millions of won)

	Note		2017	2016
Cash flows from operating activities				
Cash generated from operating activities	*33*	₩	15,373,261	6,486,781
Interest received			41,680	42,895
Interest paid			(120,332)	(125,818)
Dividends received			14,841	20,744
Income tax paid			(618,836)	(875,680)
Net cash provided by operating activities			14,690,614	5,548,922
Cash flows from investing activities				
Net change in short-term financial instruments			(2,119,004)	109,803
Decrease in other financial assets			308	5
Increase in other financial assets			(167)	(2)
Collection of loans and other receivables			18,437	15,422
Increase in loans and other receivables			(22,009)	(13,613)
Proceeds from disposal of available-for-sale financial assets			3,431	2,651
Acquisition of available-for-sale financial assets			(26,204)	(19,085)
Cash inflows from derivative transactions			902	1,077
Cash outflows from derivative transactions			(1,201)	(1,525)
Proceeds from disposal of property, plant and equipment			244,897	162,120
Acquisition of property, plant and equipment			(9,128,303)	(5,956,354)
Proceeds from disposal of intangible assets			3,249	1,585
Acquisition of intangible assets			(784,911)	(530,375)
Receipt of government grants			5,900	133
Acquisition of investments in associates			(114,487)	(2,293)
Net cash used in investing activities		₩	(11,919,162)	(6,230,451)
Cash flows from financing activities				
Proceeds from borrowings	*33*	₩	782,330	2,080,343
Repayments of borrowings	*33*		(710,635)	(1,610,466)
Dividends paid			(423,601)	(353,001)
Net cash provided by (used in) financing activities			(351,906)	116,876
Effect of movements in exchange rates on cash and cash equivalents			(83,341)	2,720
Net increase (decrease) in cash and cash equivalents			2,336,205	(561,933)
Cash and cash equivalents at beginning of the year			613,786	1,175,719
Cash and cash equivalents at end of the year		₩	2,949,991	613,786

See accompanying notes to the consolidated financial statements.

1. Reporting Entity

(1) General information about SK hynix, Inc. (the "Parent Company" or the "Company") and its subsidiaries (collectively the "Group") is as follows:

The Parent Company manufactures, distributes and sells semiconductor products and its shares have been listed on the Korea Exchange since 1996. The Parent Company's headquarters is located at 2091 Gyeongchung-daero, Bubal-eup, Icheon-si, Gyeonggi-do, South Korea, and the Group has manufacturing facilities in Icheon-si and Cheongju-si, South Korea, and Wuxi and Chongqing, China.

As of December 31, 2017, the shareholders of the Parent Company are as follows:

Shareholder	Number of shares	Percentage of ownership (%)
SK Telecom Co., Ltd.	146,100,000	20.07
National Pension Service	72,818,475	10.00
Other investors	487,083,320	66.91
Treasury shares	22,000,570	3.02
	728,002,365	100.00

The Parent Company's common shares and depositary receipts (DRs) are listed on the Stock Market of Korea Exchange and the Luxembourg Stock Exchange.

1. Reporting Entity, Continued

(2) Details of the Group's consolidated subsidiaries as of December 31, 2017 and 2016 are as follows:

Company	Location	Business	Ownership (%)	
			2017	2016
SK hyeng Inc.	Korea	Domestic subsidiary	100.00	100.00
SK hystec Inc.	Korea	Domestic subsidiary	100.00	100.00
Siliconfile Technologies Inc.	Korea	Development and manufacturing of electronic component	100.00	100.00
Happy More Inc.	Korea	Domestic subsidiary	100.00	100.00
SK hynix system ic Inc. [1]	Korea	Foundry business	100.00	-
SK hynix America Inc. (SKHYA)	U.S.A.	Overseas sales subsidiary	97.74	97.74
SK hynix Deutschland GmbH (SKHYD)	Germany	Overseas sales subsidiary	100.00	100.00
SK hynix Asia Pte. Ltd. (SKHYS)	Singapore	Overseas sales subsidiary	100.00	100.00
SK hynix Semiconductor Hong Kong Ltd. (SKHYH)	Hong Kong	Overseas sales subsidiary	100.00	100.00
SK hynix U.K. Ltd. (SKHYU)	U.K.	Overseas sales subsidiary	100.00	100.00
SK hynix Semiconductor Taiwan Inc. (SKHYT)	Taiwan	Overseas sales subsidiary	100.00	100.00
SK hynix Japan Inc. (SKHYJ)	Japan	Overseas sales subsidiary	100.00	100.00
SK hynix Semiconductor (Shanghai) Co., Ltd. (SKHYCS)	China	Overseas sales subsidiary	100.00	100.00
SK hynix Semiconductor India Private Ltd. (SKHYIS)[2]	India	Overseas sales subsidiary	100.00	100.00
SK hynix (Wuxi) Semiconductor Sales Ltd. (SKHYCW)	China	Overseas sales subsidiary	100.00	100.00
SK hynix Semiconductor (China) Ltd. (SKHYCL)	China	Overseas manufacturing subsidiary	100.00	100.00
SK hynix Semiconductor (Wuxi) Ltd. (SKHYMC)	China	Overseas manufacturing subsidiary	100.00	100.00
SK hynix Semiconductor (Chongqing) Ltd. (SKHYCQL)[3]	China	Overseas manufacturing subsidiary	100.00	100.00
SK hynix Italy S.r.l (SKHYIT)	Italy	Overseas R&D center	100.00	100.00
SK hynix memory solutions Inc. (SKHMS)	U.S.A.	Overseas R&D center	100.00	100.00
SK hynix Flash Solution Taiwan (SKHYFST)	Taiwan	Overseas R&D center	100.00	100.00
Softeq Flash Solutions LLC. (SOFTEQ)	Belarus	Overseas R&D center	100.00	100.00
SK APTECH Ltd. (SKAPTECH)	Hong Kong	Holding company	100.00	100.00
SK hynix Venture Hong Kong Ltd.(SKH Ventures)	Hong Kong	Overseas investment subsidiary	100.00	100.00
MMT (Money Market Trust)	Korea	Money Market Trust	100.00	100.00

[1] SK hynix system ic Inc. was established during the year ended December 31, 2017.
[2] Subsidiary of SK hynix Asia Pte. Ltd.
[3] Subsidiary of SK APTECH Ltd.

1. Reporting Entity, Continued

(3) Changes in the consolidated subsidiaries for the year ended December 31, 2017 are as follows:

	Company	Reason
Newly included	SK hynix system ic Inc.	Newly established

(4) Major subsidiaries' summarized separate statements of financial position as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017			2016		
	Assets	Liabilities	Equity	Assets	Liabilities	Equity
SK hynix America Inc. (SKHYA)	₩ 2,522,348	2,259,210	263,138	1,584,043	1,279,493	304,550
SK hynix Deutschland GmbH (SKHYD)	108,470	70,430	38,040	83,388	45,575	37,813
SK hynix Asia Pte. Ltd. (SKHYS)	636,286	559,400	76,886	337,506	253,918	83,588
SK hynix Semiconductor Hong Kong Ltd. (SKHYH)	1,043,889	918,305	125,584	932,437	810,556	121,881
SK hynix U.K. Ltd. (SKHYU)	325,434	308,999	16,435	146,327	128,807	17,520
SK hynix Semiconductor Taiwan Inc. (SKHYT)	566,155	536,592	29,563	310,933	290,174	20,759
SK hynix Japan Inc. (SKHYJ)	632,590	569,810	62,780	251,274	184,504	66,770
SK hynix Semiconductor (Shanghai) Co., Ltd. (SKHYCS)	414,850	379,888	34,962	46,177	18,595	27,582
SK hynix Semiconductor (China) Ltd. (SKHYCL)	4,043,100	322,545	3,720,555	3,476,086	232,117	3,243,969
SK hynix Semiconductor (Chongqing) Ltd. (SKHYCQL)	388,033	195,849	192,184	350,305	171,088	179,217

1. Reporting Entity, Continued

(5) Major subsidiaries' summarized separate statements of comprehensive income for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017			2016		
	Revenue	Profit (loss)	Total comprehensive income (loss)	Revenue	Profit (loss)	Total comprehensive income (loss)
SK hynix America Inc. (SKHYA)	₩ 11,096,526	(7,243)	(7,243)	5,398,193	117,848	117,848
SK hynix Deutschland GmbH (SKHYD)	476,709	(120)	(120)	321,309	1,747	1,747
SK hynix Asia Pte. Ltd. (SKHYS)	2,645,084	2,872	2,872	1,497,869	1,929	1,929
SK hynix Semiconductor Hong Kong Ltd. (SKHYH)	8,717,022	19,456	19,456	5,655,093	20,019	20,019
SK hynix U.K. Ltd. (SKHYU)	1,088,697	953	953	532,661	374	374
SK hynix Semiconductor Taiwan Inc. (SKHYT)	2,629,453	12,446	12,446	1,742,632	2,676	2,676
SK hynix Japan Inc. (SKHYJ)	940,254	1,761	1,761	673,127	867	804
SK hynix Semiconductor (Shanghai) Co., Ltd. (SKHYCS)	1,332,939	8,230	8,230	345,863	6,073	6,073
SK hynix Semiconductor (China) Ltd. (SKHYCL)	2,185,341	338,969	338,969	2,137,576	123,753	123,753
SK hynix Semiconductor (Chongqing) Ltd. (SKHYCQL)	355,982	23,441	23,441	296,121	2,674	2,674

(6) There are no significant non-controlling interests to the Group as of December 31, 2017 and 2016.

2. Basis of Preparation

The consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS"), as prescribed in the *Act on External Audits of Corporations in the Republic of Korea*.

The consolidated financial statements were authorized for issuance by the board of directors on January 24, 2018, which will be submitted for approval at the shareholders' meeting to be held on March 28, 2018.

(1) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis, except for the following material items in the consolidated statements of financial position:

- derivative financial instruments are measured at fair value
- financial instruments at fair value through profit or loss are measured at fair value
- available-for-sale financial assets are measured at fair value
- assets or liabilities for defined benefit plans are recognized at the net of the total present value of defined benefit obligations less the fair value of plan assets

(2) Functional and presentation currency

Financial statements of entities within the Group are presented in functional currency and the currency of the primary economic environment in which each entity operates. Consolidated financial statements of the Group are presented in Korean won, which is the Parent Company's functional and presentation currency.

(3) Use of estimates and judgments

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

(a) Critical judgments

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is included in the following notes for classification of leases.

(b) Assumptions and estimation uncertainties

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next fiscal year are included in the following notes for net realizable value of inventories, impairment of development costs and goodwill, recognition and measurement of provisions, measurement of defined benefit obligations, recognition of deferred tax assets.

2. Basis of Preparation, Continued

(3) Use of estimates and judgments, Continued

(c) Fair value measurement

The Group establishes fair value measurement policies and procedures as its accounting policies and disclosures require fair value measurements for various financial and non-financial assets and liabilities. Such policies and procedures are executed by the valuation department, which is responsible for the review of significant fair value measurements including fair values classified as level 3 in the fair value hierarchy.

The valuation department regularly reviews unobservable significant inputs and valuation adjustments. If third party information such as prices available from an exchange, dealer, broker, industry group, pricing service or regulatory agency is used for fair value measurements, the valuation division reviews whether the valuation based on third party information includes classifications by levels within the fair value hierarchy and meets the requirements for the relevant standards.

The Group uses the best observable inputs in market when measuring fair values of assets or liabilities. Fair values are classified within the fair value hierarchy based on inputs used in valuation methods as follows:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)
Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

If various inputs used to measure fair value of assets or liabilities fall into different levels of the fair value hierarchy, the Group classifies the assets and liabilities at the lowest level of inputs among the fair value hierarchy, which is significant to the entire measured value. The Group recognizes transfers between levels at the end of the reporting period of which such transfers occurred.

Information about assumptions used for fair value measurements is included in note 6.

3. Significant Accounting Policies

The significant accounting policies applied by the Group in preparation of its consolidated financial statements are explained below. Except for the new accounting standards that are effective for annual periods beginning on or after January 1, 2017, the accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

(1) Operating Segments

An operating segment is a component of the Group that: 1) engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with other components of the Group, 2) whose operating results are reviewed regularly by the Group's chief operating decision maker ("CODM") in order to allocate resources and assess its performance, and 3) for which discrete financial information is available. The Group's CODM is the board of directors, who do not receive and therefore do not review discrete financial information for any component of the Group. Consequently, no operating segment information is included in these consolidated financial statements. Entity wide disclosures of geographic, product and customer information are provided in note 4.

(2) Basis of consolidation

(a) Business combination

A business combination is accounted for by applying the acquisition method, unless it is a combination involving entities or businesses under common control.

The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred, except if related to the issue of debt or equity securities.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss.

Any contingent consideration is measured at fair value at the date of acquisition. If an obligation to pay contingent consideration that meets the definition of a financial instrument is classified as equity, then it is not remeasured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

If share-based payment awards (replacement awards) are required to be exchanged for awards held by the acquiree's employees (acquiree's awards), then all or a portion of the amount of the acquirer's replacement awards is included in measuring the consideration transferred in the business combination. This determination is based on the market-based measure of the replacement awards compared with the market-based measure of the acquiree's awards and the extent to which the replacement awards relate to pre-combination service.

3. Significant Accounting Policies, Continued

(2) Basis of consolidation, Continued

(b) Non-controlling interests

Non-controlling interests are measured at their proportionate share of the acquiree's identifiable net assets at the date of acquisition.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

(c) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Consolidation of an investee begins from the date the Group obtains control of the investee and cease when the Group loses control of the investee.

(d) Loss of control

If the Group loses control of a subsidiary, the Group derecognizes the assets and liabilities of the former subsidiary from the consolidated statement of financial position and recognizes gain or loss associated with the loss of control attributable to the former controlling interest. Any investment retained in the former subsidiary is recognized at its fair value when control is lost.

(e) Interests in equity-accounted investees

The Group's interest in equity-accounted investees comprise interests in an associate and a joint venture. An associate is an entity in which the Group has significant influence, but not control or joint control, over the entity's financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Interests in an associate and a joint venture are initially recognized at cost including transaction costs. Subsequent to initial recognition, their carrying amounts are increased or decreased to recognize the Group's share of the profit or loss and changes in equity of the associate or the joint venture. Distributions from equity-accounted investees are accounted for as deduction from the carrying amounts.

(f) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. The Group's share of unrealized gain incurred from transactions with equity-accounted investees are eliminated and unrealized loss are eliminated using the same basis if there are no evidence of asset impairments.

(g) Business combinations under common control

The assets and liabilities acquired in the combination of entities or business under common control are recognized at the carrying amounts recognized previously in the consolidated financial statements of the ultimate parent. The difference between consideration transferred and carrying amounts of net assets acquired is added to or deducted from other capital adjustments.

3. Significant Accounting Policies, Continued

(3) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments.

(4) Inventories

Inventories are measured at the lower of cost and net realizable value. The cost of inventories is based on the weighted average method (except for goods in-transit that is based on the specific identification method), and includes expenditures incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing inventories to their existing location and condition. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and selling expenses. In the case of manufactured inventories and work-in-process, cost includes an appropriate share of production overheads based on the actual capacity of production facilities. However, the normal capacity is used for the allocation of fixed production overheads if the actual level of production is lower than the normal capacity.

(5) Non-derivative financial assets

The Group recognizes and measures non-derivative financial assets by the following four categories: financial assets at fair value through profit or loss, held-to-maturity investments, loans and receivables and available-for-sale financial assets. The Group recognizes financial assets in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Upon initial recognition, non-derivative financial assets not at fair value through profit or loss are measured at their fair value plus transaction costs that are directly attributable to the asset's acquisition.

(a) Financial assets at fair value through profit or loss

A financial asset is classified as financial assets at fair value through profit or loss if it is held for trading or designated as such upon initial recognition. Upon initial recognition, transaction costs are recognized in profit or loss when incurred. Financial assets at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss.

(b) Held-to-maturity investments

A non-derivative financial asset with a fixed or determinable payment and fixed maturity, for which the Group has the positive intention and ability to hold to maturity, is classified as held-to-maturity investments. Subsequent to initial recognition, held-to-maturity investments are measured at amortized cost using the effective interest rate method.

(c) Loans and receivables

Loans and receivables are financial assets with fixed or determinable payments that are not quoted in an active market. Subsequent to initial recognition, loans and receivables are measured at amortized cost using the effective interest rate method.

3. Significant Accounting Policies, Continued

(5) Non-derivative financial assets, Continued

(d) Available-for-sale financial assets

Available-for-sale financial assets are those non-derivative financial assets that are designated as available-for-sale or are not classified as financial assets at fair value through profit or loss, held-to-maturity investments or loans and receivables. Subsequent to initial recognition, they are measured at fair value, and changes in their fair value, net of any tax effect, are recorded in other comprehensive income. Investments in equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured are measured at cost.

(e) De-recognition of financial assets

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. If the Group neither transfers nor retains substantially all of the risks and rewards of ownership of the financial assets, it derecognizes the financial assets when it does not retain control over the transferred financial assets. If the Group has retained control over the transferred financial assets, it continues to recognize the assets to the extent of its continuing involvement. If the Group retains substantially all the risks and rewards of ownership of the transferred financial assets, the Group continues to recognize the transferred financial assets and recognizes financial liabilities for the consideration received.

(f) Offsetting between financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to offset the recognized amounts, and there is the intention to settle on a net basis or to realize the asset and settle the liability simultaneously.

(6) Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

(a) Embedded derivatives

Embedded derivatives are separated from the host contract and accounted for separately only if the following criteria have been met:

- the economic characteristics and risks of the embedded derivative are not closely related to those of the host contract;
- a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
- the hybrid instrument is not measured at fair value with changes in fair value recognized in profit or loss.

Changes in the fair value of separable embedded derivatives are recognized immediately in profit or loss.

(b) Other derivative financial instruments

Changes in the fair value of other derivative financial instrument not designated as a hedging instrument are recognized immediately in profit or loss.

3. Significant Accounting Policies, Continued

(7) Impairment of financial assets

A financial asset not carried at fair value through profit or loss is assessed at the end of each reporting period to determine whether there is objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had a negative effect on the estimated future cash flows of that asset that can be estimated reliably. However, losses expected as a result of future events, regardless of likelihood, are not recognized.

Objective evidence that a financial asset is impaired includes:

- significant financial difficulty of the issuer or obligor;
- a breach of contract, such as default or delinquency in interest or principal payments;
- the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- it becoming probable that the borrower will enter bankruptcy or other financial reorganization;
- the disappearance of an active market for that financial asset because of financial difficulties; or
- observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot be identified with the individual financial assets in the group

In addition, for an investment in an equity security, a significant or prolonged decline in its fair value below its cost is objective evidence of impairment.

If there is objective evidence that financial assets are impaired, impairment losses are measured and recognized.

(a) Financial assets measured at amortized cost

An impairment loss in respect of a financial asset measured at amortized cost is calculated as the difference between its carrying amount and the present value of its estimated future cash flows discounted at the asset's original effective interest rate. If it is not practicable to obtain the financial asset's estimated future cash flows, impairment losses would be measured based on prices from any observable current market transactions. Impairment losses are deducted through an allowance account or directly from the carrying amount. If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed through profit or loss either directly or by adjusting an allowance account.

(b) Financial assets carried at cost

The amount of the impairment loss is measured as the difference between the carrying amount of the financial asset and the present value of estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment losses are not reversed.

3. Significant Accounting Policies, Continued

(7) Impairment of financial assets, Continued

(c) Available-for-sale financial assets

When a decline in the fair value of an available-for-sale financial asset has been recognized in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss that had been recognized in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment even though the financial asset has not been derecognized. Impairment losses recognized in profit or loss for an investment in an equity instrument classified as available-for-sale are not reversed through profit or loss. If, in a subsequent period, the fair value of a debt instrument classified as available-for-sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognized in profit or loss, the impairment loss is reversed, with the amount of the reversal recognized in profit or loss.

(8) Property, plant and equipment

Property, plant and equipment are initially measured at cost. The cost of property, plant and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent to initial recognition, an item of property, plant and equipment is carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Subsequent costs are recognized in the carrying amount of property, plant and equipment at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the cost will flow to the Group and it can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day repair and maintenance are recognized in profit or loss as incurred.

Property, plant and equipment, except for land, are depreciated on a straight-line basis over estimated useful lives that appropriately reflect the pattern in which the asset's future economic benefits are expected to be consumed.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recognized as other income or expenses.

The estimated useful lives of the Group's property, plant and equipment are as follows:

	Useful lives (years)
Buildings	10 - 50
Structures	10 - 30
Machinery	4 - 15
Vehicles	4 - 10
Other	3 - 15

Depreciation methods, useful lives, and residual values are reviewed at the end of each reporting period and, if appropriate, accounted for as changes in accounting estimates.

3. Significant Accounting Policies, Continued

(9) Borrowing costs

The Group capitalizes borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. Other borrowing costs are recognized in expense as incurred. A qualifying asset is an asset that requires a substantial period of time to get ready for its intended use or sale. Financial assets and inventories that are manufactured or otherwise produced over a short period of time are not qualifying assets. Assets that are ready for their intended use or sale when acquired are not qualifying assets.

To the extent that the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization as the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings. To the extent that the Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization by applying a capitalization rate to the expenditures on that asset. The capitalization rate is the weighted average of the borrowing costs applicable to the borrowings of the Group that are outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs that the Group capitalizes during a period does not exceed the amount of borrowing costs incurred during that period.

(10) Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost less accumulated amortization and accumulated impairment losses.

Goodwill arising from business combinations is recognized as the excess of the consideration transferred in the acquisition over the net fair value of the identifiable assets acquired and liabilities assumed. Any deficit is a bargain purchase that is recognized in profit or loss. Goodwill is measured at cost less accumulated impairment losses.

Amortization of intangible assets is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value of intangible assets is zero. However, certain intangible assets are determined as having indefinite useful lives and not amortized as there is no foreseeable limit to the period over which the assets are expected to be available for use.

The estimated useful lives of the Group's intangible assets are as follows:

	Useful lives (years)
Industrial rights	5 - 10
Development costs	2
Other intangible assets	4 - 50

Useful lives and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

3. Significant Accounting Policies, Continued

(10) Intangible assets, Continued

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which it relates. All other expenditures, including expenditures on internally generated goodwill and brands, are recognized in profit or loss as incurred.

(11) Government grants

Government grants are not recognized unless there is reasonable assurance that the Group will comply with the grant's conditions and that the grant will be received.

(a) Grants related to assets

Government grants whose primary condition is that the Group purchases, constructs or otherwise acquires non-current assets are deducted in calculating the carrying amount of the asset. The grant is recognized in profit or loss over the useful lives of depreciable assets.

(b) Grants related to income

Government grants which are intended to compensate the Group for expenses incurred are recognized in profit or loss by as deduction of the related expenses.

(12) Investment property

Property held for the purpose of earning rental income or benefiting from capital appreciation is classified as investment property. Investment property is initially measured at its cost. Transaction costs are included in the initial measurement. Subsequently, investment property is carried at cost less accumulated depreciation and impairment losses.

Subsequent costs are recognized in the carrying amount of investment property at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the cost will flow to the Group and it can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day repair and maintenance are recognized in profit or loss as incurred.

Investment property except for land, are depreciated on a straight-line basis over estimated useful lives.

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting period and, if appropriate, accounted for as changes in accounting estimates.

(13) Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from employee benefits, inventories, and deferred tax assets, are reviewed at the end of the reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

3. Significant Accounting Policies, Continued

(13) Impairment of non-financial assets, Continued

The Group estimates the recoverable amount of an individual asset; however if it is impossible to measure the individual recoverable amount of an asset, the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. The value in use is estimated by applying a pre-tax discount rate that reflect current market assessments of the time value of money and the risks specific to the asset or CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or CGU.

An impairment loss is recognized in profit or loss if the carrying amount of an asset or a CGU exceeds its recoverable amount.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from business combination. Any impairment identified at the CGU level will first reduce the carrying value of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis.

Except for impairment losses in respect of goodwill, which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(14) Leases

The Group classifies and accounts for leases as either a finance or operating lease, depending on the terms. Leases where the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases. All other leases are classified as operating leases.

(a) Finance leases

At the commencement of the lease term, the Group recognizes as finance lease assets and finance lease liabilities in its consolidated statements of financial position, the lower amount of the fair value of the leased property and the present value of the minimum lease payments, each determined at the inception of the lease. Any initial direct costs are added to the amount recognized as an asset.

Minimum lease payments are apportioned between the finance expense and the reduction of the outstanding liability. The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. Contingent rents are charged as expenses in the periods in which they are incurred.

The depreciable amount of a leased asset is allocated to each accounting period during the period of expected use on a systematic basis consistent with the depreciation policy the lessee adopts for depreciable assets that are owned. If there is no reasonable certainty that the lessee will obtain ownership by the end of the lease term, the asset is fully depreciated over the shorter of the lease term and its useful life. The Group reviews whether the leased asset is impaired.

(b) Operating leases

Leases where the lessor retains a significant portion of the risks and rewards of ownership are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are recognized in profit or loss on a straight-line basis over the period of the lease.

3. Significant Accounting Policies, Continued

(14) Leases, Continued

(c) Determining whether an arrangement contains a lease

Determining whether an arrangement is, or contains, a lease is based on the substance of the arrangement and requires an assessment of whether fulfillment of the arrangement is dependent on the use of a specific asset or assets (the asset) and the arrangement conveys a right to use the asset.

At inception or reassessment of the arrangement, the Group separates payments and other consideration required by such an arrangement into those for the lease and those for other elements on the basis of their relative fair values. If the Group concludes for a financial lease that it is impracticable to separate the payments reliably, the Group recognizes an asset and a liability at an amount equal to the fair value of the underlying asset that was identified as the subject of the lease. Subsequently, the liability is reduced as payments are made and an imputed finance expense on the liability recognized using the purchaser's incremental borrowing rate of interest.

(15) Non-derivative financial liabilities

The Group classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss or other financial liabilities in accordance with the substance of the contractual arrangement and the definitions of financial liabilities. The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability.

(a) Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading or designated as such upon initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, any directly attributable transaction costs are recognized in profit or loss as incurred.

3. Significant Accounting Policies, Continued

(15) Non-derivative financial liabilities, Continued

(b) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value less any directly attributable transaction costs. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest rate method. The Group derecognizes a financial liability from the consolidated statements of financial position when it is extinguished (i.e. when the obligation specified in the contract is discharged, cancelled or expires).

(16) Employee benefits

(a) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the reporting period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

(b) Other long-term employee benefits

Other long-term employee benefits include employee benefits that are settled beyond 12 months after the end of the reporting period in which the employees render the related service, and are calculated at the present value of the amount of future benefit that employees have earned in return for their service in the current and prior periods. Any changes from remeasurements are recognized through profit or loss in the period in which they arise.

(c) Retirement benefits: defined benefit plans

As of the end of reporting period, defined benefits liabilities relating to defined benefit plans are recognized as present value of defined benefit obligations, net of fair value of plan assets.

The calculation is performed annually by an independent actuary using the projected unit credit method. When the fair value of plan assets exceeds the present value of the defined benefit obligation, the Group recognizes an asset, to the extent of the present value of any economic benefits available in the form of refunds from the plan or reduction in the future contributions to the plan.

Remeasurements of the net defined benefit liability (asset) comprise of actuarial gains and losses, the return on plan assets excluding amounts included in net interest on the net defined benefit liability (asset), and any change in the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability (asset), and are recognized in other comprehensive income. The Group determines net interests on net defined benefit liability (asset) by multiplying discount rate determined at the beginning of the annual reporting period and considers changes in net defined benefit liability (asset) from contributions and benefit payments. Net interest costs and other costs relating to the defined benefit plan are recognized through profit or loss.

When the plan amendment or curtailment occurs, gains or losses on amendment or curtailment in benefits for the past service provided are recognized through profit or loss. The Group recognizes gain or loss on a settlement when the settlement of defined benefit plan occurs.

3. Significant Accounting Policies, Continued

(16) Employee benefits, Continued

(d) Retirement benefits: defined contribution plans

When an employee has provided service for a certain period of time in relation to the defined contribution plan, the contribution to the defined contribution plan is recognized in profit or loss except to be included in the cost of the asset. The contributions to be paid are recognized as liabilities (accrued expenses) less the contributions that have been already paid.

(e) Termination benefits

The Group recognizes a liability and expense for termination benefits at the earlier of the period when the Group can no longer withdraw the offer of those benefits and the period when the Group recognizes costs for a restructuring. If benefits are not payable within 12 months after the end of the reporting period, then they are discounted to their present value.

(17) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Where some or all of the expenditures required to settle a provision are expected to be reimbursed by another party, the reimbursement is recognized when, and only when, it is virtually certain that reimbursement will be received if the Group settles the obligation. The reimbursement is treated as a separate asset.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimates. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

A provision is used only for expenditures for which the provision was originally recognized.

(18) Emissions Rights

The Company accounts for greenhouse gases emission right and the relevant liability as below pursuant to the *Act on Allocation and Trading of Greenhouse Gas Emission*.

(a) Greenhouse Gases Emission Right

Greenhouse Gases Emission Right consists of emission allowances, which are allocated from the government free of charge or purchased from the market. The cost includes any directly attributable costs incurred during the normal course of business.

Emission rights held for the purpose of performing the obligation is classified as intangible asset and is initially measured at cost and after initial recognition are carried at cost less accumulated impairment losses. Emission rights held for short-swing profits are classified as current asset and are measured at fair value with any changes in fair value recognized as profit or loss in the respective reporting period.

The Group derecognizes an emission right asset when the emission allowance is unusable, disposed or submitted to government in which the future economic benefits are no longer expected to be probable.

3. Significant Accounting Policies, Continued

(18) Emissions Rights, Continued

(b) Emission liability

Emission liability is a present obligation of submitting emission rights to the government with regard to emission of greenhouse gas. Emission liability is recognized when it is probable that outflows of resources will be required to settle the obligation and the costs required to perform the obligation are reliably estimable. Emission liability is an amount of estimated obligations for emission rights to be submitted to the government for the performing period. The emission liability is measured based on the expected quantity of emission for the performing period in excess of emission allowance in possession and the unit price for such emission rights in the market at the end of the reporting period.

(19) Foreign currencies

(a) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency using the reporting date's exchange rate. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are translated to the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences arising on the settlement or retranslation of monetary items are recognized in profit or loss, except for differences arising on the retranslation of the net investment in a foreign operation, which are recognized in other comprehensive income. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss.

(b) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to presentation currency at exchange rates at the end of reporting period. The income and expenses of foreign operations are translated to functional currency at exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation is treated as assets and liabilities of the foreign operation. Thus, they are expressed in the functional currency of the foreign operation and translated at the exchange rates at the end of reporting date.

When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

3. Significant Accounting Policies, Continued

(20) Equity capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issuance of ordinary shares is recognized as a deduction from equity, net of any tax effects.

When the Group repurchases its share capital, the amount of the consideration paid is recognized as a deduction from equity and classified as treasury shares. The profits or losses from the purchase, disposal, reissue, or retirement of treasury shares are not recognized as current profit or loss. If the Group acquires and retains treasury shares, the consideration paid or received is directly recognized in equity.

(21) Share-based payment

The Group has granted shares or share options to its employees. For equity-settled share-based payment transactions, the Group measures the goods or services received, and the corresponding increase in equity as a capital adjustment at the fair value of the goods or services received, unless that fair value cannot be estimated reliably. If the Group cannot reliably estimate the fair value of the goods or services received, the Group measures their value, and the corresponding increase in equity, indirectly, by reference to the fair value of the equity instruments granted. If the fair value of the equity instruments cannot be estimated reliably at the measurement date, the Group measures them at their intrinsic value and recognizes the goods or services received based on the number of equity instruments that ultimately vest.

For cash-settled share-based payment transactions, the Group measures the goods or services acquired and the liability incurred at the fair value of the liability. Until the liability is settled, the Group remeasures the fair value of the liability at each reporting date and at the date of settlement, with changes in fair value recognized in profit or loss for the period.

(22) Revenue

Revenue from the sale of goods, rendering of services or use of assets is measured at the fair value of the consideration received or receivable, net of returns, trade discounts and volume rebates.

(a) Sale of goods

Revenue is recognized when persuasive evidence exists, usually in the form of an executed sales agreement, that the significant risks and rewards of ownership have been transferred to the buyer, recovery of the consideration is probable, the associated costs and possible return of goods can be estimated reliably, there is no continuing management involvement with the goods, and the amount of revenue can be measured reliably.

(b) Sale of services

Revenue from services rendered is recognized in profit or loss in proportion to the stage of completion of the transaction at the reporting date. The stage of completion is assessed by reference to surveys of work performed.

3. Significant Accounting Policies, Continued

(23) Finance income and finance expenses

Finance income comprises interest and dividend income on funds invested (including available-for-sale financial assets), gains on the disposal of available-for-sale financial assets, and changes in the fair value of financial instruments at fair value through profit or loss. Interest income is recognized as it accrues in profit or loss, using the effective interest rate method. Dividend income is recognized in profit or loss on the date that the Group's right to receive dividend is established.

Finance expenses comprise interest expense on borrowings, unwinding of the discount on provisions, and changes in the fair value of financial instruments at fair value through profit or loss. Interest expense on borrowings and debentures are recognized in profit or loss using the effective interest rate method.

(24) Income taxes

Income tax expense comprises current and deferred tax. Current and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

(a) Current tax

Current tax is the expected tax payable or refundable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period and any adjustment to tax payable in respect of previous years. The taxable profit is different from the accounting profit for the period since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit (tax loss) of future periods, and non-taxable or non-deductible items from the accounting profit. The tax expense is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period.

(b) Deferred tax

Deferred tax is recognized, using the asset-liability method, in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes.

The Group recognizes a deferred tax liability for all taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Group recognizes deferred tax assets for all deductible temporary differences including unused tax loss and tax credit to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduces the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, 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 deferred tax 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.

3. Significant Accounting Policies, Continued

(24) Income taxes, Continued

(b) Deferred tax, Continued

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis. If there are any additional income tax expense incurred in accordance with dividend payments, such income tax expense is recognized when liabilities relating to the dividend payments are recognized.

(25) Earnings per share

The Group presents basic and diluted earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the Parent Company by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of outstanding ordinary shares, adjusted for own shares held, for the effects of all dilutive potential ordinary shares including convertible notes.

(26) Change in Accounting Policies

The Group adopted the amendments to K-IFRS 1007 'Statement of Cash Flows' in the period beginning January 1, 2017. The amendment requires the Group to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. The Group has disclosed the reconciliation of the opening and closing balances of liabilities arising from financing activities including changes from financing cash flows; changes arising from obtaining or losing control of subsidiaries or other businesses; the effect of changes in foreign exchange rates; changes in fair values; and other changes in note 33.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective

The following new standards, amendments to standards are effective for annual periods beginning after January 1, 2017 and earlier application is permitted; however, the Group has not early adopted them in preparing these consolidated financial statements.

(a) K-IFRS 1109, *Financial Instruments*

K-IFRS 1109, '*Financial Instruments'* is effective for annual periods beginning on or after January 1, 2018, with earlier adoption permitted. It replaces existing guidance in K-IFRS 1039, '*Financial Instruments: Recognition and Measurement'*. The Group plans to adopt K-IFRS 1109 for the year beginning on January 1, 2018.

K-IFRS 1109 will generally be applied retrospectively; however, the Group plans to take advantage of the exemption allowing it not to restate the comparative information for prior periods with respect to classification and measurement (including impairment) changes. New hedge accounting requirements will generally be applied prospectively except for certain exemptions including the accounting for the time value of options.

Key features of the new standard, K-IFRS 1109, are 1) classification and measurement of financial assets that reflects the business model in which the assets are managed and their cash flow characteristics, 2) impairment methodology that reflects 'expected credit loss' (ECL) model for financial assets, and 3) expanded scope of hedged items and hedging instruments which qualify for hedge accounting and changes in assessment method for effect of hedging relationships.

K-IFRS 1109 will require the Group to assess the financial impact from application of K-IFRS 1109 and revise its accounting processes and internal controls related to financial instruments. Actual impact of adopting K-IFRS 1109 will be dependent on the financial instruments the Group holds and economic conditions at that time as well as accounting policy elections and judgment that it will make in the future.

During the year ended December 31, 2017, the Group assessed the impacts of adoption of K-IFRS 1109 on its consolidated financial statements, the accounting system and the internal controls. The potential general impact on its consolidated financial statements resulting from the application of new standard are as follows:

(i) Classification and measurement of financial assets

Under K-IFRS 1109, financial assets are classified into three principal categories; measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL) based on the business model in which assets are managed and their cash flow characteristics, as detailed in the below table.

Under K-IFRS 1109, derivatives embedded in hybrid contracts where the host is a financial asset are not bifurcated. Instead, the hybrid financial instrument as a whole is assessed for classification.

Business model	Contractual cash flows are solely payments of principal and interests	All other cases
To collect contractual cash flows	At amortized cost[1]	
Both to collect contractual cash flows and sell financial assets	At FVOCI[1]	FVTPL[2]
For trading, and others	At FVOCI	

[1] The Group may irrevocably designate as at FVTPL to eliminate or significantly reduce an accounting mismatch.
[2] The Group may irrevocably designate equity investments that is not held for trading as at FVOCI.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective, Continued

(a) K-IFRS 1109, *Financial Instruments,* Continued

As there are additional requirements for a financial asset to be classified as measured at amortized costs or FVOCI under K-IFRS 1109 compared to the existing guidance in K-IFRS 1039, the adoption of K-IFRS 1109 would potentially increase the proportion of financial assets that are measured at FVTPL, increasing volatility in the Group's profit or loss.

As of December 31, 2017, the Group has loans and receivables amounting to ₩13,257,944 million, available-for-sale financial assets amounting to ₩43,226 million, and financial assets at fair value through profit or loss amounting to ₩929,801 million.

Under K-IFRS 1109, a financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL: 1) the asset is held within a business model whose objective is to hold assets to collect contractual cash flows; and 2) 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.

Under K-IFRS 1109, a financial asset is measured at FVOCI if it meets both of the following conditions and is not designated as at FVTPL: 1) the asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and 2) the contractual terms of the financial asset give rise on specified dates to cash flow that are solely payments of principal and interest on the principal amount outstanding.

Under K-IFRS 1109, on initial recognition of equity investment that is not held for trading, the Group may irrevocably elect to present subsequent changes in fair value in OCI, and will not reclassify(recycle) the those items in OCI to profit or loss subsequently.

Under K-IFRS 1109, a financial asset is measured at FVTPL if the contractual terms of the financial asset give rise to specified dates to cash flows that are not solely payments of principal and interest on the principal amount outstanding, the debt instrument is held within a business model whose objective is to sell the asset, or the equity instruments that are not elected to be designated as measured at FVOCI.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective, Continued

(a) K-IFRS 1109, *Financial Instruments,* Continued

Based on the evaluation to date, the expected impact on classification and measurement on financial assets that existed as of December 31, 2017 resulting from the adoption of the new standard is as follows.

(In millions of won)

	Under K-IFRS 1039	Under K-IFRS 1109		Under K-IFRS 1039	Under K-IFRS 1109
Cash and cash equivalents	Loans and receivables	Amortized cost	₩	2,949,991	2,949,991
Short-term financial instruments	Financial assets at fair value through profit or loss	FVTPL		929,801	929,801
Short-term financial instruments	Loans and receivables	Amortized cost		4,674,862	4,674,862
Trade receivables	Loans and receivables	Amortized cost		5,552,795	5,552,795
Loans and other receivables	Loans and receivables	Amortized cost		80,023	80,023
Other financial assets	Loans and receivables	Amortized cost		273	273
Available-for-sale financial assets	Available-for-sale financial assets	FVTPL		43,226	43,226
			₩	14,230,971	14,230,971

(ii) Classification and measurement of financial liabilities

Under K-IFRS 1109, the amount of change in the fair value attributable to the changes in the credit risk of the financial liabilities is presented in OCI, not recognized in profit or loss, and the OCI amount will not be reclassified (recycled) to profit or loss. However, if doing so creates or increase an accounting mismatch, the amount of change in the fair value is recognized in profit or loss.

As a portion of fair value change, which was recognized in profit or loss under the existing standard, K-IFRS 1039, will be presented in OCI under K-IFRS 1109, profit or loss related to valuation of financial liabilities is likely to decrease. As of December 31, 2017, there was no financial liabilities measured at FVTPL.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective, Continued

(a) K-IFRS 1109, *Financial Instruments,* Continued

(iii) Impairment: Financial assets and contract assets

K-IFRS 1109 replaces the 'incurred loss' model in the existing standard with a forward-looking 'expected credit loss' (ECL) model for debt instruments, lease receivables, contractual assets, loan commitments, financial guarantee contracts.

Under K-IFRS 1109, impairment losses are likely to be recognized earlier than using the incurred loss model under the existing guidance in K-IFRS 1039 as loss allowances will be measured on either of the 12-month or lifetime ECL based on the extent of increase in credit risk since inception as shown in the below table.

	Classification[1]	**Loss allowances**
Stage 1	Credit risk has not increased significantly since the initial recognition[2]	12-month ECL: ECLs that resulted from possible default events within the 12 months after the reporting date
Stage 2	Credit risk has increase significantly since the initial recognition	Lifetime ECL: ECL that resulted from all possible default events over the expected life of a financial instrument
Stage 3	Credit-impaired	

[1] Under K-IFRS 1115, for trade receivables and contract assets arising with no significant credit risk, loss allowances are recognized at an amount equal to lifetime expected credit losses. However, for trade receivables and contract assets with a significant financing component arising under K-IFRS 1115, the Group may choose as its accounting policy to recognize loss allowances at an amount equal to lifetime expected credit losses. In addition, for receivables under lease arrangement, the Group may choose to recognize loss allowances at an amount equal to lifetime expected credit losses.

[2] The Group may determine that a financial asset's credit risk has not increased significantly if the asset has low credit risk at the end of reporting period.

Under K-IFRS 1109, financial assets of which the credit was impaired at the initial recognition, cumulative changes in lifetime ECL since the initial recognition are recognized as loss allowances.

As of December 31, 2017, the Group has financial instruments (loans and receivables) measured at amortized cost amounting to ₩13,260,404 million, and has recognized loss allowances for ₩2,460 million.

Upon adoption of K-IFRS 1109, the Group expects to measure the loss allowance based on the amount of expected credit losses over the entire period for trade receivables, contract assets and lease receivables that have significant financial elements. In addition, the Group plans to use the practical expedient by considering that the financial assets' credit risks had not increased significant from initial recognition through January 1, 2018.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective, Continued

(b) K-IFRS 1115, *Revenue from Contracts from Customers*

K-IFRS 1115 'Revenue from Contracts from Customers' is effective for annual periods beginning on or after January 1, 2018, with earlier adoption permitted. It replaces existing revenue recognition guidance, including K-IFRS 1018 Revenue, K-IFRS 1011 Construction Contracts, K-IFRS 2031 Revenue- Barter transactions involving advertising services, K-IFRS 2113 Customer Loyalty Programs, K-IFRS 2115 Agreements for the construction of real estate and K-IFRS 2118 Transfers of assets from customers. The Group plans to adopt K-IFRS 1115 in its consolidated financial statements for the year beginning on or after January 1, 2018, and in regards with transition to K-IFRS 1115, the Group has decided to apply the cumulative effect method, i.e. recognizing the cumulative effect of applying K-IFRS 1115 at the date of initial application, which is January 1, 2018, without restatement of the comparative periods presented. In doing so, the Group also decided to apply the practical expedients as allowed by K-IFRS 1115 by applying the new standard only to those contracts that are not considered as completed contracts at the date of initial application.

Existing K-IFRS standards and interpretations including K-IFRS 1018 provide revenue recognition guidance by transaction types such as sales of goods, rendering of services, interest income, royalty income, dividend income and construction revenue; however, under the new standard, K-IFRS 1115, the five-step approach (Step 1: Identify the contract(s) with a customer, Step 2: Identify the performance obligations in the contract, Step 3: Determine the transaction price, Step 4: Allocate the transaction price to the performance obligations in the contract, Step 5: Recognize revenue when the entity satisfied a performance obligation) is applied for all types of contracts or agreements.

The Group established a separate task force team to prepare for the adoption of K-IFRS 1115 during the year ended December 31, 2017. The Group analyzed the revenue transactions of the Group with assistance from external professional accounting advisory firm and IT system service advisors, improved the internal control processes and established the related financial reporting system. As the adoption of K-IFRS 1115 is expected to affect not only the accounting function, but also overall business practices including product sales strategy and business behavior, the Group are in the process of training employees on the changes as a result of the adoption of the new standard. The adoption plan and progress status of the new standard are reported to management on a regular basis. The information of expected impacts upon adoption of K-IFRS 1115 disclosed herein is subject to change as management obtains new information and completes its transition efforts.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective, Continued

(b) K-IFRS 1115, *Revenue from Contracts from Customers*, Continued

(i) Identification of performance obligations in the contract

The Group is engaged in the research and development, manufacture, distribution and sales of semiconductor products (DRAM, NAND flash and others), which generates a substantial portion of the consolidated revenue.

When applying K-IFRS 1115, ① sales of products and ② delivery of products (i.e. shipping service) are identified as separate performance obligations in the contracts with customers. However, for transactions for which the shipping terms are on delivery basis, which is the Group's most common transaction term, those two performance obligations are not separately identified as the control over the products is transferred upon the completion of delivery. However, for the export transactions for which the shipping terms are on shipment basis ("C-terms") and the customer pays shipping costs or insurance premiums, the two performance obligations are separately accounted for because delivery of products is performed after the control over the products is transferred to the customer. The transaction price allocated to the performance obligation of delivery service will be recognized when the obligation of delivery of the product is completed.

In estimating the financial impact of the Group in connection with the adoption of K-IFRS 1115, the Group's revenue in relation to the performance obligation of delivery of products under C-terms is expected to be deferred, however, the impact is not expected to be material.

(ii) Performance obligations that are satisfied over time: Foundry service

SK hynix system ic Inc., a subsidiary of the Parent Company, is engaged in providing foundry services to semiconductor manufacturers and the period from the receipt of the customer's order to the completion of production and delivery is generally within two months. Under the current standards, the Group recognized revenue upon the completion of delivery of items produced and the revenue recognized by the was ₩116,083 million for the year ended December 31, 2017.

According to K-IFRS 1115, the revenue in connection with the above transactions can be recognized over time under completion of percentage method when the produced items do not have any alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Based on the result of analysis for the contract conditions for foundry services and any past experience in which the Group billed intermediate payments for services performed on unfinished items, management of the Group does not believe enforceable right to payment existed for the services performed on partially completed items. Therefore, in connection with the adoption of K-IFRS 1115, the Group does not expect any financial impact in relation to the above foundry service performance obligation that is satisfied over time.

(iii) Variable consideration

In general, the Group's contract with customers allows a customer to return the products. Under K-IFRS 1115, the Group initially recognizes revenue, which is measured at the gross transaction price, less the expected level of returns using the guidance on estimating variable considerations and the constraint. The expected level of returns is estimated by using the method the Group expects to better predict the amount of consideration to which it will be entitled. Also, the Group includes an amount of variable consideration in the transaction price only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the return period expires. The Group recognizes the amounts received or receivable for which the Group does not expect to be entitled as a refund liability.

Based on the evaluation to date, upon adoption of K-IFRS 1115 on January 1, 2018, the Group's provisions are expected to decrease by ₩30,672 million and Group's other current assets and other current liabilities are expected to increase by ₩17,884 million and ₩48,556 million, respectively.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective, Continued

(b) K-IFRS 1115, *Revenue from Contracts from Customers*, Continued

(iv) Allocation of the transaction price to performance obligations

In applying K-IFRS 1115, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis. To estimate the stand-alone selling price, 'adjusted market assessment approach' will be used; however, for certain transactions, 'expected cost plus a margin approach' will be used under exceptional cases.

(v) The adoption of K-IFRS 1115 does not have any impact on the Group's consolidated statements of cash flows.

(c) K-IFRS 1116, *Leases*

K-IFRS 1116 'Leases' is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. K-IFRS 1116 replaces existing leases guidance including K-IFRS 1017, *Leases*, K-IFRS 2104, *Determining whether an Arrangement contains a Lease*, K-IFRS2015, *Operating Leases - Incentives* and K-IFRS 2027, *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*.

K-IFRS 1116 provides a single model where leasee recognize assets and liabilities in relation with lease contract on financial statements. Lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. However, there are optional exemptions for short-term leases and leases of low value items. Lessor accounting remains similar to the current standard of K-IFRS 1017.

The Group started initial assessment on the adoption of K-IFRS 1116, however more detailed assessment has not been conducted. The actual financial impact at the date of initial adoption when K-IFRS 1116 is applied is determined by a future economic environments at the date of initial application such as the borrowing interest rate and a portfolio of lease contracts as of January 1, 2019, execution of lease renewal option and coverage in use of a practical expedient and lease recognition exemption and others.

Based on the evaluation to date, the most significant impact identified is that the Group shall recognize assets and liabilities for the warehouses and manufacturing facilities used under an operating lease.

As a result of the adoption of K-IFRS 1116, the nature of costs in relation with leases will be changed as the operating lease expenses previously recognized on a straight-line basis will be changed to depreciation expenses of right-of-use assets and interest expenses of lease liabilities.

Based on the evaluation to date, the Group expects that the application of K-IFRS 1116 does not have a material impact on the Group's ability to comply with debt covenants in relation to borrowings.

3. Significant Accounting Policies, Continued

(27) Standards issued but not yet effective, Continued

(c) K-IFRS 1116, *Leases*, Continued

(i) Determining whether arrangement contains a lease

There are certain arrangements, which are not in the legal form of a lease but determined to contain lease under K-IFRS 2104. In applying K-IFRS 1116, the Group may elect either:

- applying the definition of lease under K-IFRS 1116 for the Group's entire lease contracts; or
- applying a practical expedient that the Group does not reassess whether an arrangement is, or contains, a lease

The Group plans to apply the practical expedient that maintains the definition of lease for the lease contracts existing at the date of initial application. When the practical expedient is applied, leases contracted before January 1, 2019 and identified as a lease under K-IFRS 1017 or K-IFRS 2104 are accounted for by applying K-IFRS 1116 without reassessing whether the contracts satisfy the definition of lease under the new standard.

(ii) Transition

As a lessee, the Group can apply the K-IFRS 1116 using either:

- a full retrospective approach; or
- a modified retrospective approach with a practical expedient.

Lessee should apply one of the approach consistently for lessee's entire lease contracts. Modified retrospective approach requires the lessee to recognize the cumulative effect of initial application in retained earnings as of January 1, 2019 and the comparative financial statement will not be restated.

When modified retrospective approach is applied for the lease contracts classified as an operating lease under K-IFRS 1017, leasee may elect the application of various practical expedients for each existing lease contracts at the date of adoption of the standard. The Group is assessing the financial impact when the practical expedient is applied.

4. Geographic, Product and Customer Information

The Group has a single reportable segment that is engaged in the manufacture and sale of semiconductor products. The management of the Group reviews the operation result of the semiconductor business for reporting information used and reviewed when establishing the Group's business strategy.

(1) Details of the Group's revenue for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016[1]
Sale of goods	₩	30,035,297	17,146,961
Sale of services		74,137	51,014
	₩	30,109,434	17,197,975

(2) Details of the Group's revenue by product and service types for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
DRAM	₩	22,887,259	12,340,767
NAND Flash		6,648,748	4,347,535
Other		573,427	509,673
	₩	30,109,434	17,197,975

4. Geographic, Product and Customer Information, Continued

(3) The Group's revenue information by region based on the location of selling entities for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Korea	₩	1,207,464	1,099,426
China		10,074,686	5,960,235
Taiwan		2,626,577	1,732,573
Asia (other than China and Taiwan)		3,574,788	2,165,201
U.S.A.		11,063,503	5,397,944
Europe		1,562,416	842,596
	₩	30,109,434	17,197,975

(4) The Group's non-current assets (excluding financial assets, loans and other receivables, equity-accounted investees and deferred tax assets) information by region based on the location of subsidiaries as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Korea	₩	23,959,991	18,078,337
China		2,768,494	2,805,712
Taiwan		5,752	6,835
Asia (other than China and Taiwan)		1,100	1,522
U.S.A.		318,567	364,188
Europe		8,560	9,374
	₩	27,062,464	21,265,968

(5) Revenue from customer A and B each constitutes more than 10% of the Group's consolidated revenue for the year ended December 31, 2017 amounts to ₩4,113,904 million (2016: ₩2,195,935 million) and ₩3,690,504 million (2016: ₩1,503,256 million), respectively.

5. Categories of Financial Instruments

(1) Categories of financial assets as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017			
	Financial assets at fair value through profit or loss	Available-for-sale financial assets	Loans and receivables	Total
Cash and cash equivalents	₩ -	-	2,949,991	2,949,991
Short-term financial instruments	929,801	-	4,674,862	5,604,663
Trade receivables	-	-	5,552,795	5,552,795
Loans and other receivables	-	-	80,023	80,023
Other financial assets	-	-	273	273
Available-for-sale financial assets	-	43,226	-	43,226
	₩ 929,801	43,226	13,257,944	14,230,971

(In millions of won)

	2016			
	Financial assets at fair value through profit or loss	Available-for-sale financial assets	Loans and receivables	Total
Cash and cash equivalents	₩ -	-	613,786	613,786
Short-term financial instruments	1,570,172	-	1,951,721	3,521,893
Trade receivables	-	-	3,251,652	3,251,652
Loans and other receivables	-	-	65,101	65,101
Other financial assets	-	-	423	423
Available-for-sale financial assets	-	147,779	-	147,779
	₩ 1,570,172	147,779	5,882,683	7,600,634

5. Categories of Financial Instruments, Continued

(2) Categories of financial liabilities as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017		
	Financial liabilities at fair value through profit or loss	**Financial liabilities measured at amortized cost**	**Total**
Trade payables	₩ -	758,578	758,578
Other payables	-	2,724,547	2,724,547
Other non-trade payables[1]	-	1,343,637	1,343,637
Borrowings	-	4,171,270	4,171,270
	₩ -	8,998,032	8,998,032

(In millions of won)

	2016		
	Financial liabilities at fair value through profit or loss	**Financial liabilities measured at amortized cost**	**Total**
Trade payables	₩ -	696,144	696,144
Other payables	-	1,606,417	1,606,417
Other non-trade payables[1]	-	712,580	712,580
Borrowings	-	4,335,978	4,335,978
Other financial liabilities	288	-	288
	₩ 288	7,351,119	7,351,407

[1] Details of other non-trade payables as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	**2016**
Current			
Accrued expenses	₩	1,340,225	685,154
Non-current			
Rent deposits payable		3,412	2,554
Long-term other payables		-	24,872
		3,412	27,426
	₩	1,343,637	712,580

5. Categories of Financial Instruments, Continued

(3) Details of gain and loss on financial assets and liabilities by category for the years ended December 31, 2017 and 2016 are as follows:

(a) Profit or loss

(In millions of won)

		2017	2016
Loans and receivables			
Interest income	₩	54,275	34,174
Foreign exchange differences		(679,287)	167,736
Reversal of impairment		2,119	5,617
		(622,893)	207,527
Available-for-sale financial assets			
Dividend income		13	18
Gain on disposal		30,920	-
		30,933	18
Financial assets at fair value through profit or loss			
Gain on valuation		1,399	1,133
Gain on disposal		15,754	15,348
		17,153	16,481
Financial liabilities measured at amortized cost			
Interest expenses		(123,918)	(120,122)
Foreign exchange differences		447,707	(129,670)
		323,789	(249,792)
Financial liabilities at fair value through profit or loss			
Gain on valuation from derivative instruments		-	395
Loss on transaction from derivative instruments		(11)	(448)
		(11)	(53)
	₩	(251,029)	(25,819)

(b) Other comprehensive income

(In millions of won)

		2017	2016
Loss on valuation of available-for-sale financial assets , net of tax	₩	(10,735)	-

6. Financial Risk Management

(1) Financial risk management

The Group's activities are exposed to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk 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 Group's financial performance.

Risk management is carried out by the Parent Company's corporate finance division in accordance with policies approved by the board of directors. The Parent Company's corporate finance division identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units. The board of directors provides 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 the investment of excess liquidity.

(a) Market risk

(i) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar, Euro and Japanese Yen. Foreign exchange risk arises from future commercial transactions; recognized assets and liabilities in foreign currencies; and net investments in foreign operations.

Monetary foreign currency assets and liabilities as of December 31, 2017 are as follows:

(In millions of won and millions of foreign currencies)

	Assets		Liabilities	
	Foreign currencies	Korean won equivalent	Foreign currencies	Korean won equivalent
USD	11,622	₩ 12,452,053	5,182	₩ 5,551,604
EUR	18	22,871	91	116,751
JPY	1,659	15,746	64,691	613,991

As of December 31, 2017, effects on profit before income tax as a result of change in exchange rate by 10% are as follows:

(In millions of won)

	If increased by 10%	If decreased by 10%
USD	₩ 690,045	(690,045)
EUR	(9,388)	9,388
JPY	(59,825)	59,825

6. Financial Risk Management, Continued

(ii) Interest rate risk

Interest rate risk of the Group is defined as the risk that the interest expenses arising from borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises through floating rate borrowings, and is partially offset by interests received from floating rate financial assets.

As of December 31, 2017, the Group is partially exposed to a risk of increase in interest rates. If interest rates on borrowings were 100 basis points higher/lower with all other variables held constant, profit before income tax for the following year would be ₩20,571 million (2016: ₩22,277 million) lower/higher, mainly as a result of higher/lower interest expense on floating rate borrowings and interest income on floating rate financial assets.

(iii) Price risk

The Group invests in equity and debt securities resulted from its business needs and the purpose of liquidity management. The Group's equity and debt securities are exposed to price risk as of December 31, 2017.

(b) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises mainly from operating and investing activities. In order to manage credit risk, the Group periodically evaluates the creditworthiness of each customer or counterparty through the analysis of its financial information, historical transaction records and other factors, based on which the Group establishes credit limits for each customer or counterparty.

(i) Trade and other receivables

For each new customer, the Group individually analyzes its credit worthiness before standard payment and delivery terms and conditions are offered. In addition, the Group is consistently managing trade and other receivables by reevaluating the overseas customer's credit worthiness and securing collaterals in order to limit its credit risk exposure.

The Group reviews at the end of each reporting period whether trade and other receivables are impaired and maintains credit insurance policies to manage credit risk exposure from oversea customers. The maximum exposure to credit risk as of December 31, 2017 is the carrying amount of trade and other receivables.

(ii) Other financial assets

Credit risk also arises from other financial assets such as cash and cash equivalents; short-term financial instruments; and deposits with banks and financial institutions as well as short-term and long-term loans mainly due to the bankruptcy of each counterparty to those financial assets. The maximum exposure to credit risk as of December 31, 2017 is the carrying amount of those financial assets. The Group transacts only with banks and financial institutions with high credit ratings, and accordingly management does not expect any losses from non-performance by these counterparties.

6. Financial Risk Management, Continued

(c) Liquidity risk

Liquidity risk is defined as the risk that the Group is unable to meet its short-term payment obligations on time due to deterioration of its business performance or inability to access financing. The Group forecasts its cash flow and liquidity status and sets action plans on a regular basis to manage liquidity risk proactively.

The Group invests surplus cash in interest-bearing current accounts, time deposits, and demand deposits, choosing instruments with appropriate maturities or sufficient liquidity to provide sufficient headroom as determined by the above-mentioned forecasts.

Contractual maturities of financial liabilities as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017				
	Less than 1 year	1 - 2 years	2 - 5 years	More than 5 years	Total
Borrowings (other than finance lease liabilities)	₩ 732,902	1,155,876	2,248,059	81,038	4,217,875
Finance lease liabilities	10,773	10,773	32,254	34,748	88,548
Trade payables	758,578	-	-	-	758,578
Other payables	2,724,885	-	-	-	2,724,885
Other non-trade payables	1,317,032	-	3,412	-	1,320,444
Financial guarantee contract	8	-	-	-	8
	₩ 5,544,178	1,166,649	2,283,725	115,786	9,110,338

(In millions of won)

	2016				
	Less than 1 year	1 - 2 years	2 - 5 years	More than 5 years	Total
Borrowings (other than finance lease liabilities)	₩ 785,989	706,827	2,853,218	235,562	4,581,596
Finance lease liabilities	27,043	5,350	16,050	18,725	67,168
Trade payables	696,144	-	-	-	696,144
Other payables	1,610,757	-	-	-	1,610,757
Other non-trade payables	667,485	25,224	2,554	-	695,263
Derivatives	288	-	-	-	288
Financial guarantee contract	8	-	-	-	8
	₩ 3,787,714	737,401	2,871,822	254,287	7,651,224

6. Financial Risk Management, Continued

(c) Liquidity risk, Continued

The table above analyzes the Group's non-derivative financial liabilities into relevant maturity groups based on the remaining period at the statement of financial position date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows and include estimated interest payments.

(2) Capital management
The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends to shareholders, proceeds and repayments of borrowings, issue new shares or sell assets to reduce debt.

The debt-to-equity ratio and net borrowing ratio as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Total liabilities (A)	₩	11,597,545	8,192,496
Total equity (B)		33,820,919	24,023,530
Cash and cash equivalents and short-term financial instruments (C)		8,554,654	4,135,679
Total borrowings (D)		4,171,270	4,335,978
Debt-to-equity ratio (A/B)		34.29%	34.10%
Net borrowing ratio (D-C)/B [1]		-	0.83%

[1] Does not present net borrowing ratio as of December 31, 2017 as the ratio was calculated as negative.

6. Financial Risk Management, Continued

(3) Fair value

(a) The following table presents the carrying amounts and fair values of financial instruments by categories, including their levels in the fair value hierarchy, as of December 31, 2017 and 2016:

(In millions of won)

		2017			
	Carrying amounts	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value					
Short-term financial instruments	₩ 929,801	-	929,801	-	929,801
Available-for-sale financial assets	13,526	-	-	13,526	13,526
	943,327	-	929,801	13,526	943,327
Financial assets not measured at fair value					
Cash and cash equivalents[1]	2,949,991	-	-	-	-
Short-term financial instruments[1]	4,674,862	-	-	-	-
Trade receivables[1]	5,552,795	-	-	-	-
Loans and other receivables[1]	80,023	-	-	-	-
Other financial assets[1]	273	-	-	-	-
Available-for-sale financial assets[1,2]	29,700	-	-	-	-
	13,287,644	-	-	-	-
Financial liabilities not measured at fair value					
Trade payables[1]	758,578	-	-	-	-
Other payables[1]	2,724,547	-	-	-	-
Other non-trade payables[1]	1,343,637	-	-	-	-
Borrowings	4,171,270	-	4,178,598	-	4,178,598
	₩ 8,998,032	-	4,178,598	-	4,178,598

6. Financial Risk Management, Continued

(In millions of won)

		2016			
	Carrying amounts	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value					
Short-term financial instruments	₩ 1,570,172	-	1,570,172	-	1,570,172
Financial assets not measured at fair value					
Cash and cash equivalents[1]	613,786	-	-	-	-
Short-term financial instruments[1]	1,951,721	-	-	-	-
Trade receivables[1]	3,251,652	-	-	-	-
Loans and other receivables[1]	65,101	-	-	-	-
Other financial assets[1]	423	-	-	-	-
Available-for-sale financial assets[1,2]	147,779	-	-	-	-
	6,030,462	-	-	-	-
Financial liabilities measured at fair value					
Other financial liabilities	288	-	288	-	288
Financial liabilities not measured at fair value					
Trade payables[1]	696,144	-	-	-	-
Other payables[1]	1,606,417	-	-	-	-
Other non-trade payables[1]	712,580	-	-	-	-
Borrowings	4,335,978	-	4,366,234	-	4,366,234
	₩ 7,351,119	-	4,366,234	-	4,366,234

[1] Does not include fair values of financial assets and liabilities of which fair values have not been measured as carrying amounts are reasonable approximation of fair values.

[2] Equity instruments which do not have quoted price in an active market for the identical instruments (inputs for level 1) are measured at cost in accordance with K-IFRS 1039, 'Financial Instrument: Recognition and Measurement' as fair values of such equity instruments cannot be reliably measured using other valuation techniques.

6. Financial Risk Management, Continued

(b) Valuation Techniques
The valuation techniques of recurring and non-recurring fair value measurements and quoted prices classified as level 2 or level 3 are as follows:

(In millions of won)

		Fair value	Level	Valuation Techniques
Short-term financial instruments:				
Financial assets at fair value through profit or loss	₩	929,801	2	The present value method
Available-for-sale financial assets:				
Available-for-sale equity instruments		13,526	3	The binomial model and others

(c) There was no transfer between fair value hierarchy levels for the year ended December 31, 2017 and the changes in financial assets classified as level 3 fair value measurements during the year ended December 31, 2017 are as follows:

(In millions of won)

		Beginnig Balance	Transfers	Acquisition	Disposals	Other Comprehensive Income (loss)	Ending Balance
Available-for-sale financial assets	₩	-	24,963	3,392	(22)	(14,807)	13,526

7. Restricted Financial Instruments

Details of restricted financial instruments as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016	Description
Short-term financial instruments	₩	227,500	77,500	Restricted for supporting small businesses
		5,695	6,220	Pledged for consumption tax
		1,287	-	Others
		234,482	83,720	
Other financial assets		-	308	Pledged for borrowings of childcare facilities
		11	12	Bank overdraft guarantee deposit
		262	104	Others
		273	424	
	₩	234,755	84,144	

8. Trade Receivables and Loans and Other Receivables

(1) Details of loans and other receivables as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Current			
Other receivables	₩	10,816	11,571
Accrued income		22,308	9,732
Short-term loans		2,886	3,145
Short-term guarantee and other deposits		1,603	1,163
		37,613	25,611
Non-current			
Long-term other receivables		56	60
Long-term loans		11,098	6,008
Guarantee deposits		31,109	33,261
Long-term deposits		147	161
		42,410	39,490
	₩	80,023	65,101

(2) Trade receivables and loans and other receivables, net of provision for impairment, as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017		
		Gross amount	Provision for impairment	Carrying amount
Trade receivables	₩	5,552,841	(46)	5,552,795
Current loans and other receivables		38,940	(1,327)	37,613
Non-current loans and other receivables		43,497	(1,087)	42,410
	₩	5,635,278	(2,460)	5,632,818

(In millions of won)

		2016		
		Gross amount	Provision for impairment	Carrying amount
Trade receivables	₩	3,253,489	(1,837)	3,251,652
Current loans and other receivables		26,982	(1,371)	25,611
Non-current loans and other receivables		40,966	(1,476)	39,490
	₩	3,321,437	(4,684)	3,316,753

8. Trade Receivables and Loans and Other Receivables, Continued

(3) Details of provision for impairment
Movements in the provision for impairment of trade receivables for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Beginning balance	₩	1,837	2,974
Reversal		(1,778)	(836)
Receivables written off during the year as uncollectible		-	(306)
Foreign exchange difference		(13)	5
Ending balance	₩	46	1,837

Movements in the provision for impairment of current loans and other receivables for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Beginning balance	₩	1,371	1,433
Provision		32	-
Reversal		(85)	(62)
Foreign exchange difference		9	-
Ending balance	₩	1,327	1,371

Movements in the provision for impairment of non-current loans and other receivables for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Beginning balance	₩	1,476	6,143
Provision		-	34
Reversal		(297)	(4,753)
Foreign exchange difference		(92)	52
Ending balance	₩	1,087	1,476

8. Trade Receivables and Loans and Other Receivables, Continued

(4) The aging analyses of trade receivables and loans and other receivables as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017						
	Not impaired						
		Overdue					
	Not past due	Less than 3 months	Over 3 months and less than 6 months	Over 6 months	Impaired	Total
Trade receivables	₩ 5,551,276	1,560	-	1	4	5,552,841
Current loans and other receivables	37,654	-	-	-	1,286	38,940
Non-current loans and other receivables	43,395	-	-	-	102	43,497
	₩ 5,632,325	1,560	-	1	1,392	5,635,278

(In millions of won)

	2016						
	Not impaired						
		Overdue					
	Not past due	Less than 3 months	Over 3 months and less than 6 months	Over 6 months	Impaired	Total
Trade receivables	₩ 3,252,891	598	-	-	-	3,253,489
Current loans and other receivables	25,692	-	-	-	1,290	26,982
Non-current loans and other receivables	40,864	-	-	-	102	40,966
	₩ 3,319,447	598	-	-	1,392	3,321,437

9. Inventories

(1) Details of inventories as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017		
	Acquisition cost	**Inventory valuation allowance**	**Carrying amount**
Finished goods	₩ 544,978	(111,573)	433,405
Work-in-process	1,653,778	(36,889)	1,616,889
Raw materials	322,283	(26,031)	296,252
Supplies	278,422	(7,618)	270,804
Goods in transit	23,089	-	23,089
	₩ 2,822,550	(182,111)	2,640,439

(In millions of won)

	2016		
	Acquisition cost	**Inventory valuation allowance**	**Carrying Amount**
Finished goods	₩ 429,348	(37,845)	391,503
Work-in-process	1,153,100	(22,607)	1,130,493
Raw materials	264,402	(3,725)	260,677
Supplies	194,701	(23)	194,678
Goods in transit	48,847	-	48,847
	₩ 2,090,398	(64,200)	2,026,198

(2) The amount of the inventories recognized as cost of sales and loss on (reversal of) valuation allowance of inventories charged to (deducted from) cost of sales are as follows:

(In millions of won)

		2017	2016
Inventories recognized as cost of sales	₩	12,700,702	10,787,034
Loss on (reversal of) valuation allowance of inventories		117,911	(124,046)

10. Other Current and Non-current Assets

Details of other current and non-current assets as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Current			
Advance payments	₩	34,887	1,853
Prepaid expenses		222,411	238,831
Value added tax refundable		263,287	148,756
Others		3,053	9,913
		523,638	399,353
Non-current			
Long-term advance payments		183,489	-
Long-term prepaid expenses		553,231	568,907
Others		-	1,495
		736,720	570,402
	₩	1,260,358	969,755

11. Investments in Associates and Joint Ventures

(1) Details of investments in associates and joint ventures as of December 31, 2017 and 2016 are as follows:

(In millions of won)

Type	Investee	Ownership in 2017 (%)		2017 Net asset value	2017 Carrying amount	2016 Carrying amount
Associate	Stratio, Inc.[1]	9.12	₩	104	2,105	2,151
	SK China Company Limited[1, 2]	11.87		192,561	244,912	-
	Gemini Partners Pte. Ltd.	20.00		2,308	4,003	5,199
	TCL Fund[1]	11.06		2,634	2,634	2,219
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd. (HITECH)	45.00		106,210	106,210	121,447
			₩		359,864	131,016

[1] The Group is able to exercise significant influence through its right to appoint a director to the board of directors of each investee. Accordingly, the investments in these investees have been accounted for using the equity method.

[2] During the year ended December 31, 2017, the Group acquired shares of SK China Company Limited through a combination of contribution in kind of available-for-sale financial assets for which the fair value amounted to ₩143,209 million as of acquisition date and cash in the amount of ₩113,960 million.

(2) Changes in investments in associates and joint ventures for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017 Beginning balance	Acquisition	Share of profit (loss)	Other equity movement	Dividend	Ending balance
Stratio, Inc.	₩	2,151	-	(30)	(16)	-	2,105
SK China		-	257,169	-	(12,257)	-	244,912
Gemini Partners Pte. Ltd.		5,199	-	(1,084)	(112)	-	4,003
TCL Fund		2,219	526	16	(127)	-	2,634
HITECH		121,447	-	13,465	(13,874)	(14,828)	106,210
	₩	131,016	257,695	12,367	(26,386)	(14,828)	359,864

(In millions of won)

		2016 Beginning balance	Acquisition	Share of profit (loss)	Other equity movement	Dividend	Ending balance
Stratio, Inc.	₩	2,171	-	(24)	4	-	2,151
Gemini Partners Pte. Ltd.		7,976	-	(2,909)	132	-	5,199
TCL Fund		-	2,293	50	(124)	-	2,219
HITECH		112,462	-	25,635	4,076	(20,726)	121,447
	₩	122,609	2,293	22,752	4,088	(20,726)	131,016

11. Investments in Associates and Joint Ventures, Continued

(3) Associate and joint venture's statements of financial position as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017			
	Current assets	Non-current assets	Current liabilities	Non-current liabilities
Stratio, Inc.	₩ 681	577	111	-
SK China	812,882	934,872	54,752	70,213
Gemini Partners Pte. Ltd.	6,227	5,314	2	-
TCL Fund	7,863	15,957	-	-
HITECH	192,905	334,678	79,725	211,835

(In millions of won)

	2016			
	Current assets	Non-current assets	Current liabilities	Non-current liabilities
Stratio, Inc.	₩ 998	686	27	-
Gemini Partners Pte. Ltd.	13,047	4,467	93	-
TCL Fund	16,388	3,993	329	-
HITECH	184,048	350,094	82,581	181,679

(4) Associate and joint venture's statements of comprehensive income (loss) for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017		2016	
	Revenue	Profit (loss) for the year	Revenue	Profit (loss) for the year
Stratio, Inc.	₩ 33	(339)	4	(198)
SK China	-	-	-	-
Gemini Partners Pte. Ltd.	183	(5,423)	-	(5,848)
TCL Fund	-	152	-	(4)
HITECH	585,904	29,923	566,893	55,346

12. Available-for-sale Financial Assets

(1) Details of available-for-sale financial assets as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017			2016
	Ownership (%)/ Type	Acquisition cost	Book value	Book value
ProMOS	7.93	₩ 21,847	-	-
JNT Frontier Private Equity Unit	Certificate	684	684	971
SV M&A No.1 Equity Unit	Certificate	-	-	805
Daishin Aju IB Investment Co., Ltd. Equity Unit	Certificate	483	483	483
Seoul Investment Early & Green Venture Fund	Certificate	1,513	1,513	1,648
TS 2011-4 Technology Transfer & Business Equity Unit	Certificate	318	318	566
IMM Investment Equity Unit	-	-	-	224
L&S Venture Capital Equity Unit	Certificate	1,170	1,170	1,170
KTC-NP-Growth Equity Unit	Certificate	2,155	2,155	2,956
Semiconductor Growth Fund	Certificate	17,250	17,250	-
Intellectual Discovery, Ltd.	7.05	4,000	1,699	4,000
SKY Property Mgmt. Ltd. [1]	-	-	-	112,360
CHINA WALDEN VENTURE INVESTMENTS II	Certificate	7,312	6,116	6,188
Exnodes Inc.	Convertible Bond	716	716	716
Netspeed	6.07	3,083	558	3,083
Keyssa, Inc.	2.29	6,174	832	6,174
MEMS DRIVE, INC.	2.94	2,246	844	2,246
AutoTech Fund I, LP	Certificate	1,444	1,444	-
RENO SUB-SYSTEM, INC.	2.68	2,246	204	-
IMEC.XPAND COMM.VA	Certificate	1,607	1,607	-
Equity investment in a construction guarantee association	0.01	709	709	709
Information and communication guarantee association	0.01	15	15	15
Beijing Starblaze Tech Co., Ltd.	6.29	3,273	3,273	3,465
Shanghai Natlinear Electronics Co., Ltd.	4.12	1,636	1,636	-
		₩ 79,881	43,226	147,779

[1] The Group acquired shares in SK China Company Limited through the contribution in kind of available-for-sale financial assets (SKY Property Mgmt. Ltd.) with the book value of ₩112,360. The Group recognized a gain on disposal of available-for-sale financial assets amounted to ₩30,849 million during the year ended December 31, 2017.

12. Available-for-sale Financial Assets, Continued

(2) Changes in the carrying amount of available-for-sale financial assets for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Beginning balance	₩	147,779	131,354
Acquisition		26,204	19,085
Disposal		(115,720)	(2,652)
Loss on valuation		(14,807)	-
Foreign exchange difference		(230)	(8)
Ending balance	₩	43,226	147,779

13. Property, Plant and Equipment

(1) Changes in property, plant and equipment for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017							
		Land	Buildings	Structures	Machinery	Vehicles	Others	Construction -in-progress	Total
Beginning net book amount	₩	575,755	2,514,376	516,145	13,196,508	1,041	435,643	1,537,934	18,777,402
Changes during 2017									
Additions		7,950	216,035	279,553	6,642,678	117	161,007	2,980,042	10,287,382
Receipt of government grants		-	(1,000)	-	-	-	-	-	(1,000)
Disposals		(2,220)	(2,141)	(3,180)	(164,301)	(1)	(507)	(47,615)	(219,965)
Depreciation		-	(112,343)	(49,851)	(4,301,152)	(379)	(155,051)	-	(4,618,776)
Transfers		1,483	330,333	108,366	876,697	-	6,463	(1,323,342)	-
Impairments		-	-	-	-	-	-	-	-
Exchange differences and others		(1,427)	(14,507)	(11,413)	(120,362)	(1)	(5,334)	(9,398)	(162,442)
Ending net book amount		581,541	2,930,753	839,620	16,130,068	777	442,221	3,137,621	24,062,601
Acquisition cost		581,541	3,807,324	1,262,928	46,463,886	3,081	1,217,216	3,137,621	56,473,597
Accumulated depreciation		-	(851,655)	(404,204)	(30,163,696)	(2,304)	(774,959)	-	(32,196,818)
Accumulated impairment		-	(23,699)	(19,104)	(165,509)	-	(35)	-	(208,347)
Government grants		-	(1,217)	-	(4,613)	-	(1)	-	(5,831)
	₩	581,541	2,930,753	839,620	16,130,068	777	442,221	3,137,621	24,062,601

13. Property, Plant and Equipment, Continued

(In millions of won)

	2016							
	Land	Buildings	Structures	Machinery	Vehicles	Others	Construction -in-progress	Total
Beginning net book amount ₩	567,614	2,525,041	424,609	11,639,208	1,369	395,938	1,412,473	16,966,252
Changes during 2016								
Additions	567	35,972	116,419	4,690,241	54	131,975	1,221,974	6,197,202
Receipt of government grants	-	-	-	(133)	-	-	-	(133)
Disposals	(2,824)	(53)	(45)	(147,960)	-	(396)	(7,063)	(158,341)
Depreciation	-	(100,250)	(34,907)	(3,866,582)	(381)	(131,660)	-	(4,133,780)
Transfers	10,018	61,213	18,264	957,016	-	40,771	(1,087,282)	-
Impairments	-	(264)	(2,814)	(668)	-	-	-	(3,746)
Exchange differences and otehrs	380	(7,283)	(5,381)	(74,614)	(1)	(985)	(2,168)	(90,052)
Ending net book amount	575,755	2,514,376	516,145	13,196,508	1,041	435,643	1,537,934	18,777,402
Acquisition cost	575,755	3,287,424	909,991	43,439,176	3,555	1,085,379	1,537,934	50,839,214
Accumulated depreciation	-	(749,076)	(374,742)	(29,993,593)	(2,514)	(649,669)	-	(31,769,594)
Accumulated impairment	-	(23,698)	(19,104)	(243,540)	-	(59)	-	(286,401)
Government grants	-	(274)	-	(5,535)	-	(8)	-	(5,817)
₩	575,755	2,514,376	516,145	13,196,508	1,041	435,643	1,537,934	18,777,402

(2) Details of depreciation expense allocation for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017	2016
Cost of sales ₩	4,213,339	3,797,210
Selling and administrative expenses	292,325	276,969
Other expenses	7,647	5,307
Development costs and other	105,465	54,294
₩	4,618,776	4,133,780

(3) Certain property, plant and equipment are pledged as collaterals for borrowings of the Group as of December 31, 2017 (see note 32).

(4) The Group capitalized borrowing costs amounting to ₩3,964 million (2016: ₩14,663 million) on qualifying assets during the year ended December 31, 2017. Borrowing costs were calculated using a capitalization rate of 1.53% (2016: 3.59%) for the year ended December 31, 2017.

13. Property, Plant and Equipment, Continued

(5) The Group leases certain machinery and others from ME Semiconductor Rental First L.L.C. and others under finance lease agreements.

The book value of the machinery and others subject to finance lease agreement amounted to: ₩79,161 million as of December 31, 2017 (as of December 31, 2016: ₩67,245 million). The machinery and others are pledged as collateral for the finance lease liabilities.

The Group leases certain machinery and others from Macquarie Capital and others under operating lease agreements. The payment schedule of minimum lease payments under operating lease agreements as of December 31, 2017 is as follows:

(In millions of won)

		Minimum lease payments
No later than 1 year	₩	164,349
Later than 1 year		194,161
	₩	358,510

(6) Details of insured assets as of December 31, 2017 is as follows:

(In millions of won)

	Insured assets		Insured amount	Insurance Company
Package insurance	Property, plant and equipment; investment property; inventories; and business interruption	₩	63,622,518	Hyundai Marine & Fire Insurance Co., Ltd. and others
Fire insurance	Property, plant and equipment; investment property		75,348	
Erection all risks insurance	Property, plant and equipment		8,912,280	
		₩	72,610,146	

In addition to the assets stated above, vehicle and delivery equipment are insured by vehicle comprehensive insurance and liability insurance.

14. Intangible Assets

(1) Changes in intangible assets for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017				
		Goodwill	Industrial property rights	Development costs	Others	Total
Beginning net book amount	₩	730,204	98,963	629,882	456,542	1,915,591
Changes during 2017						
Internal development		-	-	511,647	-	511,647
Separate acquisition		-	26,572	-	246,692	273,264
Disposals		-	(4,872)	-	(1,076)	(5,948)
Amortization		-	(15,810)	(259,279)	(132,265)	(407,354)
Impairment		-	-	-	(769)	(769)
Exchange differences		(35,131)	-	-	(4,010)	(39,141)
Ending net book amount		695,073	104,853	882,250	565,114	2,247,290
Acquisition cost		695,073	184,971	2,293,388	950,432	4,123,864
Accumulated amortization and impairment		-	(80,118)	(1,411,138)	(354,424)	(1,845,680)
Government grants		-	-	-	(30,894)	(30,894)
	₩	695,073	104,853	882,250	565,114	2,247,290

(In millions of won)

		2016				
		Goodwill	Industrial property rights	Development costs	Others	Total
Beginning net book amount	₩	720,755	89,787	483,330	411,024	1,704,896
Changes during 2016						
Internal development		-	-	352,022	-	352,022
Separate acquisition		-	28,269	-	150,352	178,621
Disposals		-	(5,208)	-	(1,595)	(6,803)
Amortization		-	(14,299)	(205,198)	(103,072)	(322,569)
Impairment		-	-	(272)	(98)	(370)
Exchange differences		9,449	414	-	(69)	9,794
Ending net book amount		730,204	98,963	629,882	456,542	1,915,591
Acquisition cost		730,204	171,873	1,797,606	718,765	3,418,448
Accumulated amortization and impairment		-	(72,910)	(1,167,724)	(227,262)	(1,467,896)
Government grants		-	-	-	(34,961)	(34,961)
	₩	730,204	98,963	629,882	456,542	1,915,591

(2) Details of amortiation expense allocation for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Cost of sales	₩	46,308	28,877
Selling and administrative expenses		360,183	293,316
Development costs		863	376
	₩	407,354	322,569

14. Intangible Assets, Continued

(3) Goodwill impairment tests
Goodwill impairment tests are undertaken annually. As the Group has only one CGU, goodwill was allocated to one CGU. Recoverable amount of the CGU was determined based on fair value less costs to sell, which was determined using the current stock price as of December 31, 2017. No impairment loss of goodwill was recognized since the recoverable amount is higher than carrying value of the CGU as of December 31, 2017.

(4) Details of development costs
(a) Detailed criteria for capitalization of development costs
The Group's development projects for a new product proceeds in the process of review and planning phases (Phase 0 ~ 4) and product design and mass production phases (Phase 5 ~ 8). The Group recognizes expenditures incurred after Phase 4 in relation with the development for new technology is recognized as an intangible asset. Expenditures incurred at phase 0 through 4 are recognized as expenses.

(b) Development cost capitalized and expenses on research and development
Among costs associated with development activities, ₩511,647 million (2016: ₩352,022 million) that met capitalization criteria, were capitalized as development cost for the year ended December 31, 2017. In addition, costs associated with research activities and other development expenditures that did not meet the criteria in the amount of ₩1,975,386 million (2016: ₩1,744,711 million) were recognized as expenses for the year ended December 31, 2017.

(c) Details of development costs as of December 31, 2017 and 2016 are as follows:
(In millions of won)

	2017		
	Individual Asset	**Book value**	**Residual amortization period**
DRAM	1xnm B	₩ 305,848	19 months
	1xynm[1]	192,260	-
NAND	F14	3,990	4 months
	3D(48)	42,343	9 months
	3D(72)	111,164	18 months
	3D(96)[1]	186,488	-
	3D(128)[1]	8,635	-
CIS	Hi-1332	2,520	9 months
	Hi-1333[1]	7,695	-
	Hi-1336[1]	7,235	-
	Hi-1221[1]	3,431	-
	Hi-1631[1]	10,641	-
		₩ 882,250	

[1] Amortization has not started as of December 31, 2017

14. Intangible Assets, Continued

(In millions of won)

		2016	
	Individual Asset	**Book value**	**Residual amortization period**
DRAM	1xnm A	₩ 45,967	7 months
	1xnm B[1]	279,531	-
	1xynm[1]	20,399	-
NAND	3D(36) A	14,566	10 months
	3D(36) B	8,554	10 months
	F14	15,960	16 months
	3D(48)	98,800	21 months
	3D(72)[1]	109,479	-
	3D(96)[1]	27,099	-
CIS	Hi-842	91	5 months
	Hi-1331	774	5 months
	Hi-1332	5,880	21 months
	Hi-1333[1]	1,956	-
	Hi-1221[1]	826	-
		₩ 629,882	

[1] Amortization has not started as of December 31, 2016

(d) There are no impairment losses and reversals of impairment in development costs recognized for the years ended December 31, 2017 and 2016, and there are no accumulated impairment losses in development costs recognized as of December 31, 2017 and 2016.

15. Investment Property

(1) Changes in investment property for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017	2016
Beginning net book amount	₩ 2,573	2,679
Depreciation	(105)	(106)
Ending net book amount	2,468	2,573
Acquisition cost	5,170	5,170
Accumulated depreciation	(2,702)	(2,597)
	₩ 2,468	2,573

(2) The depreciation expense of ₩105 million was charged to cost of sales for the year ended December 31, 2017 (2016: ₩106 million).

(3) Rental income from investment property during the year ended December 31, 2017 was ₩495 million (2016: ₩500 million).

16. Borrowings

(1) Details of borrowings as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Current			
Short-term borrowings	₩	192,686	-
Current portion of long-term borrowings		361,258	384,124
Current portion of debentures		219,836	320,736
		773,780	704,860
Non-current			
Long-term borrowings		2,080,333	2,095,737
Debentures		1,317,157	1,535,381
		3,397,490	3,631,118
	₩	4,171,270	4,335,978

(2) Details of short-term borrowings as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	Financial Institutions	Interest rate per annum in 2017 (%)		2017	2016
General borrowings	Korea Export-Import Bank	3M LIBOR + 0.73	₩	107,140	-
	City Bank	3M LIBOR + 0.80		53,466	-
	Industrial & Commercial Bank of China	3M LIBOR + 1.35		21,387	-
	China Bank	3M LIBOR + 1.10		10,693	-
			₩	192,686	-

16. Borrowings, Continued

(3) Details of long-term borrowings as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	Financial institutions	Interest rate per annum in 2017 (%)[1]	2017	2016
Local currency borrowings:				
Borrowings for childcare facilities	NongHyup Bank	-	₩ -	62
Funds for equipment	Korea Development Bank	-	-	83,333
	KEB Hana Bank	-	-	30,000
	Korea Development Bank	2.02~2.50	500,000	200,000
Finance lease liabilities	Hansu Technical Service Ltd.	3.70	74,557	38,948
	ME Semiconductor Rental First L.L.C.	-	-	8,688
Funds for equipment	NongHyup Bank	1.00	1,170	-
Finance lease liabilities	Veolia Water Industrial Development Co., Ltd.	4.00	1,732	-
			577,459	361,031
Foreign currency borrowings:				
General borrowings	Export-Import Bank of Korea	3M LIBOR + 1.00~1.40	910,690	825,808
	Woori Bank	3M LIBOR + 1.20	107,140	120,850
		3M LIBOR + 0.98	160,710	181,275
Funds for equipment	Korea Development Bank	3M LIBOR + 1.15	107,140	120,850
		3M LIBOR + 0.95	160,710	181,275
		3M LIBOR + 1.25	214,280	241,700
	KEB Hana Bank	3M LIBOR + 1.23	85,712	96,680
	NongHyup Bank	3M LIBOR + 1.33	64,284	96,680
		-	-	120,850
Finance lease liabilities	Goodmemory First L.L.C.	-	-	12,671
Funds for equipment	Standard Chartered Bank Korea Ltd.	3M LIBOR + 3.45	53,466	120,191
			1,864,132	2,118,830
			2,441,591	2,479,861
Less: Current maturities			(361,258)	(384,124)
			₩ 2,080,333	2,095,737

[1] As of December 31, 2017, the annual interest rates are as follows:

Type	Interest rate per annum as of December 31, 2017
3M LIBOR	1.69

16. Borrowings, Continued

(4) Details of debentures as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	Maturity date	Interest rate per annum in 2017 (%)		2017	2016
Unsecured notes in local currency:					
212th	May 30, 2019	5.35	₩	450,000	450,000
213th	Sep. 4, 2017	-		-	200,000
214-1st	Aug. 26, 2020	2.27		210,000	210,000
214-2nd	Aug. 26, 2022	2.63		140,000	140,000
215-1st	Nov. 25, 2018	2.26		70,000	70,000
215-2nd	Nov. 25, 2020	2.56		100,000	100,000
215-3rd	Nov. 25, 2022	2.75		10,000	10,000
216-1st	Feb. 19, 2018	1.74		70,000	70,000
216-2nd	Feb. 19, 2021	2.22		180,000	180,000
216-3rd	Feb. 19, 2023	2.53		80,000	80,000
217-1st	May 27, 2018	1.73		80,000	80,000
217-2nd	May 27, 2021	2.30		150,000	150,000
Secured notes in foreign currency:					
Foreign 8th	Jun. 20, 2017	-		-	120,850
				1,540,000	1,860,850
Less: Discounts on debentures				(3,007)	(4,733)
Current portion				(219,836)	(320,736)
			₩	1,317,157	1,535,381

16. Borrowings, Continued

(5) Finance lease liability
Lease liabilities are effectively secured as the rights to the leased asset belong to the lessor.

Details of future minimum lease payments to the lessor as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Total minimum lease payment			
No later than 1 year	₩	10,773	27,043
Between 1 and 5 years		43,027	21,400
Later than 5 years		34,748	18,725
		88,548	67,168
Discount on present value		(12,259)	(6,861)
Net minimum lease payment			
No later than 1 year		10,563	26,603
Between 1 and 5 years		38,550	19,136
Later than 5 years		27,176	14,568
	₩	76,289	60,307

17. Other Current and Non-current Liabilities

Details of other current and non-current liabilities as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Current			
Advance receipts	₩	3,040	3,781
Unearned income		81	228
Withholdings		39,862	42,622
Deposits received		989	1,539
Others		7,804	2,328
		51,776	50,498
Non-current			
Other long-term employee benefits		63,960	61,883
Long-term advance receipts		4,900	-
		68,860	61,883
	₩	120,636	112,381

18. Provisions

(1) Details of changes in provisions for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017				
	Beginning balance	Increase	Utilization	Reversal	Ending Balance
Warranty	₩ 2,997	7,682	(6,872)	-	3,807
Sales returns	13,317	118,564	(101,209)	-	30,672
Legal claims	400	9,460	(400)	-	9,460
Emission allowances	26,108	11,999	(695)	-	37,412
	₩ 42,822	147,705	(109,176)	-	81,351

(In millions of won)

	2016				
	Beginning balance	Increase	Utilization	Reversal	Ending Balance
Warranty	₩ 2,936	38,584	(38,523)	-	2,997
Sales returns	14,736	33,284	(34,703)	-	13,317
Legal claims	1,523	400	(1,097)	(426)	400
Emission allowances	6,081	21,366	(1,339)	-	26,108
	₩ 25,276	93,634	(75,662)	(426)	42,822

(2) Provisions for warranty
The Group estimates the expected warranty costs based on historical results and accrues provisions for warranty.

(3) Provisions for sales returns
The Group estimates the expected sales returns based on historical results and adjusts sales and cost of sales, respectively. Accordingly, related gross profit and estimated expenses related to the return (such as transportation costs) are recorded as provisions for sales returns.

(4) Provisions for legal claims
The Group recognizes provisions for legal claims when the Group has a present legal or constructive obligation as a result of past events and an outflow of resources required to settle the obligation is probable and the amount can be reliably estimated.

(5) Provision for emission allowances
The Group recognizes estimated future payment for the number of emission certificates required to settle the Group's obligation exceeding the actual number of certificates on hand as emission allowances according to the Act on Allocation and Trading of Greenhouse Gas Emission Permits.

19. Defined Benefit Liabilities

Under the defined benefit plan, the Group pays employee benefits to retired employees in the form of a lump sum that are based on their salaries and years of service at the time of their retirement. Accordingly, the Group is exposed to a variety of actuarial assumption risks such as risk associated with expected years of service, interest risk, and market (investment) risk.

(1) Details of defined benefit liabilities as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Present value of defined benefit obligations	₩	1,330,559	1,195,047
Fair value of plan assets		(1,337,848)	(888,559)
Net defined benefit liabilities (assets)	₩	(7,289)	306,488
Defined benefit liabilities		6,096	306,488
Defined benefit assets[1]		(13,385)	-

[1] The Parent Company's Fair value of plan assets in excess of the present value of defined benefit obligations amounted to ₩13,385 million as of December 31, 2017 is presented as defined benefit assets.

(2) Principal actuarial assumptions as of December 31, 2017 and 2016 are as follows:

	2017 (%)	2016 (%)
Discount rate for defined benefit obligations	3.81 ~ 4.35	3.09 ~ 4.10
Expected rate of salary increase	2.20 ~ 5.46	2.20 ~ 5.48

(3) Weighted average durations of defined benefit obligations as of December 31, 2017 and 2016 are 11.47 and 12.11 years, respectively.

(4) Changes in defined benefit obligations for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Beginning balance	₩	1,195,047	1,055,340
Current service cost		156,777	159,190
Past service cost		-	33,198
Interest cost		46,877	41,148
Transfer from (to) associates		546	(2,440)
Remeasurements:		(23,406)	(47,817)
Demographic assumption		-	-
Financial assumption		(47,319)	5,792
Adjustment based on experience		23,913	(53,609)
Benefits paid		(45,241)	(43,602)
Effect of movements in exchange rates		(41)	30
Ending balance	₩	1,330,559	1,195,047

19. Defined Benefit Liabilities, Continued

(5) Changes in plan assets for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Beginning balance	₩	888,559	570,363
Contributions		460,772	327,640
Interest income		34,880	20,204
Transfer from (to) associates		550	(1,331)
Benefits paid		(27,383)	(19,151)
Remeasurements		(19,530)	(9,166)
Ending balance	₩	1,337,848	888,559

(6) The amounts recognized in profit or loss for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Current service cost	₩	156,777	159,190
Past service cost		-	33,198
Net interest expense		11,997	20,944
	₩	168,774	213,332

(7) The amounts in which defined benefit plan related expenses are included for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Cost of sales	₩	95,301	118,417
Selling and administrative expenses		73,473	87,119
	₩	168,774	205,536

(8) Details of plan assets as of December 31, 2017 and December 31, 2016 are as follows:

(In millions of won)

		2017	2016
Deposits	₩	1,336,484	887,074
Other		1,364	1,485
	₩	1,337,848	888,559

Actual return on plan assets for the years ended December 31, 2017 and 2016 amounted to ₩15,350 million and ₩11,038 million, respectively.

19. Defined Benefit Liabilities, Continued

(9) As of December 31, 2017, the Group funded defined benefit obligations through insurance plans with Mirae Asset Life Insurance Co., Ltd. and other insurance companies. The Group's reasonable estimation of contribution to the plan assets for the year ending December 31, 2018 is ₩254,554 million under the assumption that the Group maintains the defined benefit plan.

(10) The sensitivity analysis of the defined benefit obligations as of December 31, 2017 to changes in the principal assumptions is as follows:

(In millions of won)

		Effects on defined benefit obligation	
		Increase of rate	**Decrease of rate**
Discount rate (if changed by 1%)	₩	(135,018)	158,508
Expected rate of salary increase (if changed by 1%)		159,116	(137,904)

The sensitivity analysis does not consider dispersion of all cash flows that are expected from the plan and provides approximate values of sensitivity for the assumptions used.

(11) Information about the maturity profile of the defined benefit obligation as of December 31, 2017 is as follows:

(In millions of won)

		2017				
		Less than 1 year	**1 - 5 years**	**5 - 10 years**	**10 - 20 years**	**Total**
Benefits paid	₩	44,905	313,626	779,466	2,944,492	4,082,489

Information about the maturity profile is based on undiscounted amount of defined benefit obligation and classified to employee's expected years of remaining services.

(12) The Group adopted defined contribution retirement pension for the employees subject to peak wage system. Contributions to defined contribution plans amounting to ₩76 million (2016: ₩12 million) was recognized as cost of sales for the year ended December 31, 2017.

20. Deferred Income Tax

(1) Changes in deferred income tax assets and liabilities for the years ended December 31, 2017 and 2016 without taking into consideration the offsetting of balances within the same tax jurisdiction, are as follows:

(In millions of won)

	2017				
	January 1, 2017	**Profit or loss**	**Equity**	**Foreign exchange differences**	**December 31, 2017**
Loss on valuation of inventories	₩ 16,976	32,342	-	(152)	49,166
Accumulated depreciation	85,032	223,393	-	(8,792)	299,633
Defined benefits liabilities	60,889	(59,344)	(1,114)	(15)	416
Available-for-sale financial assets	34,441	4,802	4,072	-	43,315
Employee benefits	28,671	5,490	-	(3)	34,158
Provisions	36,758	4,147	-	(137)	40,768
Advanced depreciation provision	(55,666)	(7,553)	-	-	(63,219)
Others	39,597	13,743	-	(1,505)	51,835
Deferred tax assets for temporary differences, net	246,698	217,020	2,958	(10,604)	456,072
Tax credit carryforwards recognized	360,131	(351,182)	-	(912)	8,037
Tax loss carryforwards recognized	180,807	(31,852)	-	(18,835)	130,120
Deferred tax assets recognized	₩ 787,636	(166,014)	2,958	(30,351)	594,229

(In millions of won)

	2016				
	January 1, 2016	**Profit or loss**	**Equity**	**Foreign exchange differences**	**December 31, 2016**
Loss on valuation of inventories	₩ 40,341	(23,388)	-	23	16,976
Accumulated depreciation	51,963	34,331	-	(1,262)	85,032
Defined benefits liabilities	15,985	(23,267)	68,171	-	60,889
Available-for-sale financial assets	34,427	14	-	-	34,441
Employee benefits	4,955	23,716	-	-	28,671
Provisions	22,151	14,607	-	-	36,758
Advanced depreciation provision	(55,666)	-	-	-	(55,666)
Others	76,591	(31,898)	-	(5,096)	39,597
Deferred tax assets for temporary differences, net	190,747	(5,885)	68,171	(6,335)	246,698
Tax credit carryforwards recognized	128,145	231,881	-	105	360,131
Tax loss carryforwards recognized	34,730	139,323	-	6,754	180,807
Deferred tax assets recognized	₩ 353,622	365,319	68,171	524	787,636

20. Deferred Income Tax, Continued

(2) As of December 31, 2017, the deductible temporary differences that are not recognized as deferred tax assets (liabilities) are as follows:

(In millions of won)

		2017	2016
Investments in subsidiaries, associates, and joint ventures and others	₩	317,133	787,500

21. Derivative Financial Instruments

(1) Details of derivative financial liabilities as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Current			
Interest rates swap	₩	-	288

(2) Details of gains and losses from derivative instruments for the years ended December 31, 2017 and 2016 are follows:

(In millions of won)

		2017			
		Gain on valuation	Loss on valuation	Gain on transaction	Loss on transaction
Interest rates swap	₩	-	-	902	913

(In millions of won)

		2016			
		Gain on valuation	Loss on valuation	Gain on transaction	Loss on transaction
Interest rates swap	₩	395	-	1,077	1,525

22. Capital Stock, Capital Surplus and Other Equity

(1) The Parent Company has 9,000,000,000 authorized shares and the face value per share is ₩5,000 as of December 31, 2017. The number of shares issued, common stock, capital surplus and other capital as of December 31, 2017 and 2016, are as follows:

(In millions of won, thousands of shares)

		2017	2016
Issued shares[1]		731,530	731,530
Capital stock:			
Common stock	₩	3,657,652	3,657,652
Capital surplus:			
Additional paid in capital		3,625,797	3,625,797
Others		517,939	517,939
		4,143,736	4,143,736
Other equity:			
Acquisition cost of treasury shares		(771,913)	(771,913)
Stock option		813	-
	₩	(771,100)	(771,913)
Number of treasury shares		22,001	22,001

[1] As of December 31, 2017, the number of outstanding shares is 728,002 thousand shares, which differs from total issued shares due to the effect of stock retirement.

(2) There are no changes in number of outstanding shares during the year ended December 31, 2017 and 2016.

23. Accumulated Other Comprehensive Loss

(1) Details of accumulated other comprehensive loss as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Equity-accounted investees – share of other comprehensive income (loss)	₩	(20,442)	5,944
Loss on valuation of available-for-sale financial asset		(10,735)	-
Foreign operations – foreign currency translation differences		(471,087)	(85,047)
	₩	(502,264)	(79,103)

(2) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017		
		Beginning	Change	Ending
Equity-accounted investees – share of other comprehensive income (loss)	₩	5,944	(26,386)	(20,442)
Loss on valuation of available-for-sale financial assets		-	(10,735)	(10,735)
Foreign operations – foreign currency translation differences		(85,047)	(386,040)	(471,087)
	₩	(79,103)	(423,161)	(502,264)

(In millions of won)

		2016		
		Beginning	Change	Ending
Equity-accounted investees – share of other comprehensive income	₩	1,856	4,088	5,944
Foreign operations – foreign currency translation differences		(3,456)	(81,591)	(85,047)
	₩	(1,600)	(77,503)	(79,103)

24. Retained Earnings and Dividends

(1) Details of retained earnings as of December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Legal reserve[1]	₩	108,354	65,994
Discretionary reserve[2]		235,506	235,506
Unappropriated retained earnings		26,943,396	16,765,083
	₩	27,287,256	17,066,583

[1] The Commercial Code of the Republic of Korea requires the Parent Company to appropriate for each financial year, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued capital stock. The reserve is not available for cash dividends payment, but may be transferred to capital stock or used to reduce accumulated deficit.
[2] Discretionary reserve is a reserve for technology development.

(2) Dividends of the Parent Company

(a) Details of dividends for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won and In thousands of shares)

		2017	2016
Type of dividends		Cash Dividends	Cash Dividends
Outstanding ordinary shares		706,002	706,002
Par value (in won)	₩	5,000	5,000
Dividend rate		20%	12%
Total dividends	₩	706,002	423,601

(b) Dividend payout ratio for the years ended December 31, 2017 and 2016 is as follows:

(In millions of won)

		2017	2016
Dividends	₩	706,002	423,601
Profit attributable to owners of the Parent Company		10,641,512	2,953,774
Dividend payout ratio		6.63%	14.34%

(c) Dividend yield ratio for the years ended December 31, 2017 and 2016 is as follows:

(In won)

		2017	2016
Dividends per share	₩	1,000	600
Closing stock price		76,500	44,700
Dividend yield ratio		1.31%	1.34%

25. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Selling and administrative expenses:			
Salaries	₩	467,824	348,571
Defined benefit plan		25,841	30,135
Employee benefits		87,299	86,721
Commission		232,799	230,903
Depreciation		96,153	82,461
Amortization		348,519	282,392
Freight and custody charge		38,920	31,821
Legal cost		33,251	9,286
Rental		13,633	14,571
Taxes and dues		17,132	18,160
Training		27,105	19,503
Advertising		83,748	47,055
Utilities		14,480	14,204
Supplies		82,108	56,067
Repair		35,871	6,185
Travel and transportation		11,166	10,459
Sales promotion		57,180	42,170
Sales repair		7,682	38,584
Others		30,168	20,131
		1,710,879	1,389,379
Research and development:			
Expenditure on research and development		2,487,033	2,096,733
Development cost capitalized		(511,647)	(352,022)
		1,975,386	1,744,711
	₩	3,686,265	3,134,090

26. Expenses by Nature

Nature of expenses for the years ended December 31, 2017 and 2016 is as follows:

(In millions of won)

		2017	2016[2]
Changes in finished goods and work-in-process	₩	(528,298)	(60,415)
Raw materials, supplies and consumables		4,257,017	3,437,714
Employee benefit		3,059,690	2,317,687
Depreciation and amortization		4,912,260	4,396,478
Royalty		221,789	229,422
Commission		1,254,084	986,059
Utilities		971,489	840,129
Repair		946,132	604,458
Outsourcing		895,996	785,755
Other		397,949	383,942
Total[1]	₩	16,388,108	13,921,229

[1] Total expenses consist of cost of sales and selling and administrative expenses.
[2] Expenses for the year ended December 31, 2016 were reclassified to conform with the classification for the year ended December 31, 2017.

27. Finance Income and Expenses

Finance income and expenses for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Finance income:			
Interest income	₩	54,275	34,174
Dividend income		13	18
Foreign exchange differences		893,047	762,747
Gain from derivative instruments		902	1,472
Gain on disposal of financial assets at fair value through profit or loss		15,754	15,348
Gain on valuation of financial assets at fair value through profit or loss		1,399	1,133
Gain on disposal of available-for-sale financial assets		31,078	-
		996,468	814,892
Finance expenses:			
Interest expenses		123,918	120,122
Foreign exchange differences		1,124,628	724,681
Loss on disposal of available-for-sale financial assets		158	-
Loss from derivative instruments		913	1,525
		1,249,617	846,328
Net finance expense	₩	(253,149)	(31,436)

28. Other Income and Expenses

(1) Other income for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Gain on disposal of property, plant and equipment	₩	35,161	13,167
Gain on disposal of intangible asset		758	-
Other		41,963	39,204
	₩	77,882	52,371

(2) Other expense for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Loss on disposal of property, plant and equipment	₩	10,229	6,566
Loss on disposal of intangible assets		4,872	5,218
Loss on disposal of trade receivables		7,049	3,137
Loss on impairment of property, plant and equipment		-	3,746
Loss on impairment of intangible assets		769	98
Donation		76,195	51,629
Other		19,746	33,585
	₩	118,860	103,979

29. Income Tax Expense

(1) Income tax expense for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)		2017	2016
Current tax:			
Current tax on profits for the year	₩	2,687,405	543,594
Adjustments for the current tax liabilities attributable to prior year, but recognized in current year		(56,072)	77,696
		2,631,333	621,290
Deferred tax:			
Changes in net deferred tax assets		166,014	(365,319)
Income tax expense	₩	2,797,347	255,971

(2) The relationship between tax expense and accounting profit for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)		2017	2016
Profit before income tax	₩	13,439,566	3,216,454
Tax calculated at domestic tax rates applicable to profits in the respective countries		3,204,233	777,920
Tax effects of:			
Tax-exempt income		(157)	(2,669)
Non-deductible expenses		4,703	3,981
Change in unrecognized deferred tax assets		(113,829)	(517,805)
Tax credit		(126,213)	(101,843)
Adjustments for the current tax liabilities attributable to prior year, but recognized in current year		(56,072)	77,696
Others		64,682	18,691
Income tax expense	₩	2,797,347	255,971

(3) Income taxes recognized in other comprehensive income (loss) for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)		2017	2016
Remeasurements of defined benefit liabilities	₩	(1,114)	68,171
Gain on valuation of available-for-sale financial assets		4,072	-
		2,958	68,171

30. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to ordinary shareholders of the Parent Company by the weighted average number of outstanding ordinary shares during the years.

(1) Basic earnings per share for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won, except for shares and per share information)

		2017	2016
Profit attributable to ordinary shareholders of the Parent Company	₩	10,641,512	2,953,774
Weighted average number of outstanding ordinary shares[1]		706,001,795	706,001,795
Basic earnings per share (in won)	₩	15,073	4,184

[1] Weighted average number of outstanding ordinary shares is calculated as follows:

(In shares)

	2017	2016
Outstanding ordinary shares	728,002,365	728,002,365
Acquisition of treasury shares	(22,000,570)	(22,000,570)
Weighted average number of outstanding ordinary shares	706,001,795	706,001,795

(2) Diluted earnings per share for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won, except for shares and per share information)

		2017	2016
Profit attributable to ordinary shareholders of the Parent Company	₩	10,641,512	2,953,774
Weighted average number of diluted outstanding ordinary shares[1]		706,038,232	706,001,795
Diluted earnings per share (in won)	₩	15,072	4,184

[1] Weighted average number of diluted ordinary shares outstanding is calculated as follows:

(In shares)

	2017	2016
Weighted average number of outstanding ordinary shares	706,001,795	706,001,795
Stock options	36,437	-
Weighted average number of diluted outstanding ordinary shares	706,038,232	706,001,795

31. Transactions with Related Parties and Others

(1) Details of related parties as of December 31, 2017 are as follows:

Type	Name of related parties
Associates	Stratio, Inc., SK China Company Limited, Gemini Partners Pte. Ltd., TCL Fund
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.
Other related parties	SK Telecom Co., Ltd., which has significant influence over the Group, SK Holdings Co., Ltd., which has control over SK Telecom Co., Ltd., and their subsidiaries

31. Transactions with Related Parties and Others, Continued

(2) Significant transactions for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017			
	Company	Operating revenue and others	Operating expense and others	Asset acquisition	Dividend income
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	₩ 5,782	582,745	-	14,828
Other related parties	SK Telecom Co., Ltd.[1]	318	96,441	24,183	-
	SK Holdings Co., Ltd.[2]	994	174,556	142,913	-
	ESSENCORE Limited	749,238	-	-	-
	SK Engineering & Construction Co., Ltd.	27,433	7,290	1,464,735	-
	SK Energy Co., Ltd.	5,075	54,682	-	-
	SK Networks Co., Ltd.	-	5,350	-	-
	SKC Solmics Co., Ltd.	-	30,486	1,020	-
	Chungcheong energy service Co., Ltd.	10	16,062	10	-
	Happynarae Co., Ltd.	34	455,632	36,516	-
	SK Materials Co., Ltd.	3	50,657	-	-
	SK Siltron Co., Ltd.	1,538	84,791	-	-
	Others	667	172,703	29,787	-
		₩ 791,092	1,731,395	1,699,164	14,828

[1] Operating expense and others include dividend payments of ₩87,660 million.
[2] For the year ended December 31, 2017, royalty paid for the use of the SK brand amounted to ₩34,882 million.

(In millions of won)

		2016			
	Company	Operating revenue and others	Operating expense and others	Asset acquisition	Dividend income
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	₩ 1,171	568,526	17,678	20,726
Other related parties	SK Telecom Co., Ltd.[1]	375	81,125	12,181	-
	SK Holdings Co., Ltd.[2]	907	133,441	146,823	-
	ESSENCORE Limited	571,639	-	-	-
	SK Engineering & Construction Co., Ltd.	2,512	21,838	659,312	-
	SK Energy Co., Ltd.	4,683	47,768	-	-
	SK Networks Co., Ltd.	-	4,747	-	-
	SKC Solmics Co., Ltd.	-	34,433	432	-
	Chungcheong energy service Co., Ltd.	10	16,460	-	-
	Happynarae Co., Ltd.	30	173,948	13,595	-
	SK Materials Co., Ltd.	-	43,213	-	-
	Others	432	125,662	17,528	-
		₩ 581,759	1,251,161	867,549	20,726

[1] Operating expense and others include dividend payments of ₩73,050 million.
[2] For the year ended December 31, 2016, royalty paid for the use of the SK brand amounted to ₩37,887 million.

31. Transactions with Related Parties and Others, Continued

(3) The balances of significant transactions as of December 31, 2017 and 2016 are as follows:

(In millions of won)

	2017			
	Company		**Trade receivables and others**	**Other payables and others**
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	₩	-	90,782
Other related parties	SK Telecom Co., Ltd.		94	3,014
	SK Holdings Co., Ltd.		5,530	108,038
	ESSENCORE Limited		90,367	-
	SK Engineering & Construction Co., Ltd.		7,327	946,517
	SK Energy Co., Ltd.		500	10,505
	SK Networks Co., Ltd.		-	1,395
	SKC Solmics Co., Ltd.		-	3,393
	Chungcheong energy service Co., Ltd.		11	2,128
	Happynarae Co., Ltd.		3	55,126
	SK Materials Co., Ltd.		-	11,692
	SK Siltron Co., Ltd. [1]		150,521	21,071
	Others		90	99,043
		₩	254,443	1,352,704

[1] The Group has paid ₩150,000 million in advance for the purchase of wafers during the year ended December 31, 2017 (See note 32).

(In millions of won)

	2016			
	Company		**Trade receivables and others**	**Other payables and others**
Joint venture	HITECH Semiconductor (Wuxi) Co., Ltd.	₩	-	99,328
Other related parties	SK Telecom Co., Ltd.		92	4,281
	SK Holdings Co., Ltd.		6,343	98,396
	ESSENCORE Limited		72,507	-
	SK Engineering & Construction Co., Ltd.		2,016	530,940
	SK Energy Co., Ltd.		417	6,544
	SK Networks Co., Ltd.		-	1,143
	SKC Solmics Co., Ltd.		-	10,067
	Chungcheong energy service Co., Ltd.		-	1,804
	Happynarae Co., Ltd.		3	23,046
	SK Materials Co., Ltd.		-	9,205
	Others		5	45,656
		₩	81,383	830,410

31. Transactions with Related Parties and Others, Continued

(4) Key management compensation

Key management includes the Parent Company's directors, members of the board of directors, chief financial officer, and internal auditors. The compensation paid to key management for employee services for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

Details		2017	2016
Salaries	₩	106,291	68,504
Defined benefit plan related expenses		8,840	8,184
Share-based payment		813	-
Others		13	21
	₩	115,957	76,709

(5) The significant transactions between the Group and the companies that are in the same conglomerate group according to '*Fair Trade Law*' as of December 31, 2017 and 2016 are as follows. These entities are not related parties according to K-IFRS 1024, '*Related Party Disclosures*'.

(In millions of won)

			2017			
	Company		Operating revenue and others	Operating expense and others	Asset acquisition	Dividend income
Companies in the Conglomerate	SK Discovery Co., Ltd.	₩	-	1,204	-	-
	SK Chemicals Co., Ltd.		-	38	-	-
		₩	-	1,242	-	-

(In millions of won)

			2016			
	Company		Operating revenue and others	Operating expense and others	Asset acquisition	Dividend income
Companies in the Conglomerate	SK Chemicals Co., Ltd.	₩	-	532	-	-

(6) The balances of significant transactions between the Group and the companies that are in the same conglomerate group designated by '*Fair Trade Law*'. The details of the balances as of December 31, 2017 and 2016 are as follows. These entities are not related parties according to K-IFRS 1024, '*Related Party Disclosures*'.

(In millions of won)

			2017	
	Company		Trade receivables and others	Other payables and others
Companies in the Conglomerate	SK Discovery Co., Ltd.	₩	-	339
	SK Chemicals Co., Ltd.		-	38
		₩	-	377

(In millions of won)

			2016	
	Company		Trade receivables and others	Other payables and others
Companies in the Conglomerate	SK Chemicals Co., Ltd.	₩	-	183

32. Commitments and Contingencies

(1) The details of litigations and claims of the Group as of December 31, 2017 are as follows:

(a) Lawsuit from Netlist, Inc.
Netlist, Inc. filed a lawsuit against SK hynix, the Parent Company and others, which are subsidiaries of the Parent Company alleging infringement of multiple patents to U.S. District Court for the Central District of California, on August 31, 2016 and June 14, 2017, to the U.S. International Trade Commission on September 1, 2016 and October 31, 2017 and to German District Court of Munich and Beijing Intellectual Property Court, respectively, on July 11, 2017. As of December 31, 2017, the patent infringement lawsuits filed by Netlist, Inc. in the U.S. have not been finalized and the final result cannot be predicted.

Meanwhile, the lawsuit filed to the US International Trade Commission on September 1, 2016 was finalized on January 16, 2018 in conclusion that the Parent Company and its subsidiaries did not infringe the patents of Netlist, Inc.

(b) Other patent infringement claims and litigation
In addition to the above litigations, the Group has responded to various disputes related to intellectual property rights and has recognized a liability when it is probable that an outflow of resources will arise and a loss can be reliably estimated.

(2) Technology and patent license agreements
The Group has entered into a number of patent license agreements with several companies. The related royalties are paid on a lumpsum or running basis in accordance with the respective agreements. The lumpsum royalties are expensed over the contract period using the straight-line method.

(3) Contract for supply of industrial water
The Group has entered into a contract with Veolia Water Industrial Development Co., Ltd. ("VWID") under which the Group purchases industrial water from VWID by March 2018. According to the contract, the Group is obligated to pay base service charges, which are predetermined and additional service charges which are variable according to the amount of water used.

(4) Post- process service contract with HITECH
The Group has entered into an agreement with HITECH to be provided with post-process service by HITECH. The conditions of the service provided includes package, package test, modules and others. According to the agreement, the Group is liable to guarantee a certain level of margin to HITECH.

(5) Assets provided as collateral
Details of assets provided as collateral as of December 31, 2017 are as follows:

(In millions of won)

		Book value	Pledged amount	Remark
Land	₩	18,055		
Buildings		52,582	1,398,765	Borrowings for equipment and others
Machinery		1,114,508		
	₩	1,185,145	1,398,765	

Other than the above assets provided as collateral, the finance lease assets of the Group are pledged as collateral for the finance lease liabilities in accordance with the finance lease contracts.

32. Commitments and Contingencies, Continued

(6) Financing agreements
Details of credit lines with financial institutions as of December 31, 2017 are as follows:

(In millions of won and millions of foreign currencies)

	Financial Institution	Commitment	Currency	Amount
The Parent Company	KEB Hana Bank and others	Import finance including usance	USD	265
		Export finance including bills bought	USD	250
		Comprehensive limit contract for import and export	USD	960
		Accounts receivable factoring contracts which have no right to recourse	KRW	140,000
SK Hynix Semiconductor (China) Ltd. (SKHYCL)	Agricultural Bank of China and others	Import finance including usance	RMB	1,300
			USD	232
SK Hynix America Inc. (SKHYA) and other sales entities	Citibank and others	Accounts receivable factoring contracts which have no right to recourse	USD	319
Domestic subsidiaries	KEB Hana Bank	Export finance including bills bought	KRW	500
		Guarantee	KRW	10,000
		Agent contract for procurement payment	KRW	15,000

(7) Details of guarantees provided to others as of December 31, 2017 are as follows:

(In millions of won)

		Amount	Remark
Employees	₩	8	Guarantees for employees' borrowings relating to employee stock ownership

(8) Capital commitments
The Group's unrecorded commitments in relation to the capital expenditures on property, plant and equipment as of December 31, 2017 and 2016 are ₩661,588 million and ₩293,730 million, respectively.

(9) Equity investment in Toshiba semiconductor business
The Group has decided to invest JPY 266,000 million in BCPE Pangea Intermediate Holdings Cayman, LP and acquire convertible bonds of JPY 129,000 million issued by BCPE Pangea Cayman 2 Limited, by participating in a consortium including Bain Capital ("Bain Consortium") in connection with the Bain Consortium's acquisition of Toshiba's semiconductor business.

Meanwhile, the Bain Consortium and Toshiba signed an agreement to acquire Toshiba's semiconductor business and approvals from various countries' government were in process as of December 31, 2017. The completion of the arrangement is subject to the results of compliance in the prerequisites set forth in the arrangement including the approval by various countries' government.

(10) Long-term purchase agreement for raw materials
The Group has entered into a procurement agreement with SK Siltron Co., Ltd. from 2019 to 2023 for stable supply of wafer with an advanced payment of ₩150,000 million during the year ended December 31, 2017. In addition, SK Siltron Co., Ltd. has committed to provide certain portion of its investment assets as collateral to secure the advanced payment of ₩150,000 million prepaid by the Group.

33. Statements of Cash Flows

(1) Reconciliations between profit for the year and net cash inflow from operating activities for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Profit for the year	₩	10,642,219	2,960,483
Adjustment			
Income tax expense		2,797,347	255,971
Defined benefit plan		168,774	213,332
Depreciation		4,618,776	4,133,780
Depreciation of investment property		105	106
Amortization		407,354	322,569
Share-based compensation expenses		813	-
Loss on disposal of property, plant and equipment		10,229	6,566
Loss on disposal of intangible assets		4,872	5,218
Loss on impairment of property, plant and equipment		-	3,746
Loss on impairment of intangible assets		769	98
Interest expense		123,918	120,122
Loss on foreign currency translation		246,316	116,500
Loss on disposal of subsidiaries investment stock		-	371
Gain on equity method investments, net		(12,367)	(22,752)
Gain on disposal of property, plant and equipment		(35,161)	(13,167)
Gain on disposal of intangible assets		(758)	-
Gain on valuation of financial assets at fair value through profit or loss		(1,399)	(1,133)
Gain on disposal of financial assets at fair value through profit or loss		(15,754)	(15,348)
Gain on disposal of available-for-sale financial assets		(31,078)	-
Loss on derivative instruments, net		11	53
Interest income		(54,275)	(34,174)
Gain on foreign currency translation		(310,978)	(106,840)
Others, net		3,664	326
Changes in operating assets and liabilities			
Increase in trade receivables		(2,964,272)	(470,792)
Decrease (increase) in loans and other receivables		(36,541)	62,758
Increase in inventories		(634,623)	(110,769)
Increase in other assets		(302,967)	(55,760)
Increase (decrease) in trade payables		514,751	(208,439)
Increase in other payables		(110)	(23,558)
Increase (decrease) in other non-trade payables		666,770	(328,871)
Increase in provisions		38,860	17,521
Increase in other liabilities		4,081	5,018
Payment of defined benefit liabilities		(15,313)	(18,514)
Contributions to plan assets		(460,772)	(327,640)
Cash generated from operating activities	₩	15,373,261	6,486,781

33. Statements of Cash Flows, Continued.

(2) Details of significant transactions without inflows and outflows of cash for the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
In-kind investment for SK China Company Limited	₩	143,209	-
Increase in other payables related to acquisition of property, plant and equipment		1,154,195	224,412

(3) Changes in liabilities arising from financial activities during the years ended December 31, 2017 and 2016 are as follows:

(In millions of won)

		2017	2016
Beginning balance	₩	4,335,978	3,818,595
Cash flows from financing activities			
Proceeds from borrowings		782,329	2,080,343
Repayments of borrowings		(710,635)	(1,610,466)
Foreign currency differences		(238,112)	44,345
Present value discount (interest expense)		1,710	3,161
Ending balance	₩	4,171,270	4,335,978

34. Share-based payment

(1) The Group granted equity-settled stock options to the Group's key management during the year ended December 31, 2017 and the stock options as of December 31, 2017 are as follows.

(In shares)

	Total numbers of share option granted	Exercised	Forfeited or Cancelled	Outstanding at December 31, 2017
1st	99,600	-	-	99,600
2nd	99,600	-	-	99,600
3rd	99,600	-	-	99,600
	298,800	-	-	298,800

	Grant date	Service Period for Vesting	Exercisable Period	Exercise price (in won)
1st	March 24, 2017	March 24, 2017 - March 24, 2019	March 25, 2019 - March 24, 2022	48,400
2nd	March 24, 2017	March 24, 2017 - March 24, 2020	March 25, 2020 - March 24, 2023	52,280
3rd	March 24, 2017	March 24, 2017 - March 24, 2021	March 25, 2021 - March 24, 2024	56,460

(2) Measurement of fair value

The compensation cost is calculated by applying a binomial option-pricing model in estimating the fair value of the option at grant date. The inputs used are as follows:

	1st	2nd	3rd
Expected volatility	23.23%	23.23%	23.23%
Estimated fair value of share option (in won)	10,026	9,613	9,296
Dividend yield ratio	1.20%	1.20%	1.20%
Risk free ratio	1.86%	1.95%	2.07%

(3) The compensation expense for the year ended December 31, 2017 was ₩813 million.

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