LG CORP. AND ITS SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED
DECEMBER 31, 2018 AND 2017

ATTACHMENT: INDEPENDENT AUDITORS' REPORT

LG CORP.

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Independent Auditors' Report

English Translation of Independent Auditors' Report Originally Issued in Korean on March 18, 2019.

To the Shareholders and the Board of Directors of
LG Corp.:

Report on the Audited Consolidated Financial Statements

Our Opinion

We have audited the accompanying consolidated financial statements of LG Corp. and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as of December 31, 2018, and December 31, 2017, respectively, and the consolidated statements of profit or loss, the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows, for the years then ended, and a summary of significant accounting policies and other explanatory information.

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

Basis for Audit Opinion

We conducted our audits in accordance with the Korean Standards on Auditing ("KSAs"). Our responsibilities under those standards are further described in the *Auditors' 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, including those related to independence, that are relevant to our audit of the consolidated financial statements in the Republic of Korea as required by prevailing audit regulations. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

The key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon, and we do not provide a separate opinion on these matters.

(1) The change in the estimate of total contract cost

As noted in Note 18 of consolidated financial statements, changes in the estimate of total contract costs for contracts that recognize revenue over time using the cost-based input method may affect current, future profit or loss, contract assets and contract liabilities, and total contract costs are estimated on the basis of future estimates, such as labor costs, material costs and project periods.

Estimating the total cost of a contract requires expert knowledge of the cost design and is deemed to involve the risk that the cost changes resulting from the project will not be reflected in the total cost in a timely manner. Therefore, we decided to make the item a key audit considering the effect of the change in the estimate of total contract cost on profit or loss and future profit or loss.

At the end of the current term, the following are the major audit procedures we have carried out in relation to the change in the estimate of the company's total contract cost:

- Understanding of the design of internal controls related to the timely reflection of total contract cost and the accuracy of estimation

- Retrospective review of changes in total contract cost of current period projects

- Verification of accuracy and timeliness of the change of total contract cost during the current period

- Verifying subsequent events on total contract cost of projects in progress at the end of the current period

(2) Impairment test of Investment Equity owned by Associates

As noted in Note 13, the consolidated company has a 30.5% stake in LG Electronics Inc., which is classified as an associate.

On the other hand, LG Electronics Inc. classifies its 37.9% stake in LG Display Co. ("LGD") as an associate and accounts for it using the equity method. LG Electronics Inc. has a carrying amount of ₩5,191,084 million at the end of the reporting period.

LG Electronics Inc., a significant component of the consolidated company, performed an impairment test in accordance with K-IFRS 1036 ‘impairment of Assets’, noting that the market value of its stake in LGD declined during the current period.

During the current period, we decided the impairment test for the stakes of LGD of the associates, LG Electronics Inc., as the key audit matter, considering the significant decrease in the market value of the LGD and the significant management judgement involved in the valuation of the value of use in performing the impairment test, and considering the potential impact of the corresponding impairment test on the consolidated financial statements.

The followings are the major audit procedures we have conducted to ensure the adequacy of the audit procedures performed on the impairment test:

- Verification of the independence, objectivity and qualification of the component auditor to obtain audit evidence for the purpose of the group audit related to LGD impairment test.

- Review of audit documents of the component auditor for the following tasks carried out by the component auditor to evaluate the adequacy and sufficiency of audit evidence obtained and, asking questions, if necessary.

- Conduct questions and reviews on the valuation model applied to the LGD impairment test and evaluate the appropriateness of the key assumptions applied to the valuation.
- Evaluate the appropriateness of management's estimation of past business plan by comparing LGD's performance to its past business plan.
- Understand the future cash flows of LGD and verify if future cash flow estimates match business plans approved by management
- Perform sensitivity analysis to assess the impact of changes in major assumptions on impairment test results

Deloitte.

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

Management is responsible for the preparation of the accompanying consolidated financial statements in accordance with K-IFRSs, and for such internal control as they determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

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

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with KSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, 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 override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of the management's use of the going-concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our 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 or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We are solely responsible for our audit opinion.

We communicate with those charged with governance of the Group 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 of the Group with a statement that we have complied with relevant ethical requirements, including those related to independence, and to communicate with them all 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 consolated 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 Young-Jae Kim.

Deloitte Anjin LLC

March 18, 2019

Notice to Readers

This report is effective as of March 18, 2019, the auditors' report date. Certain subsequent events or circumstances may have occurred between the auditors' report date and the time the auditors' report is read. Such events or circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to the auditors' report.

LG CORP.
AND ITS SUBSIDIARIES (the "Group")

CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED
DECEMBER 31, 2018 AND 2017

The accompanying consolidated financial statements, including all footnote disclosures, were prepared by, and are the responsibility of, the management of the Group.

Young-Soo Kwon
President and Chief Operating Officer
LG Corp.

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
AS OF DECEMBER 31, 2018 AND 2017

	Korean won	
	December 31, 2018	December 31, 2017
	(In millions)	
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents (Notes 5, 6, 31 and 34)	₩ 1,054,293	₩ 1,309,949
Financial institution deposits (Notes 5, 31 and 34)	348,699	438,214
Current derivative assets (Notes 5 and 34)	1,241	1,798
Trade receivables, net (Notes 5, 7, 30 and 34)	2,755,238	3,023,304
Other receivables, net (Notes 5, 7, 30 and 34)	25,118	83,816
Current tax assets	6,957	6,703
Current other assets (Notes 9 and 18)	305,391	284,668
Inventories, net (Note 8)	116,148	109,989
Assets held for sale (Note 38)	-	109,368
Total current assets	4,613,085	5,367,809
NON-CURRENT ASSETS:		
Available-for-sale ("AFS") financial assets (Notes 5 and 34)	117,217	121,817
Non-current trade receivables, net (Notes 5, 7, 30 and 34)	25,751	25,734
Non-current other receivables, net (Notes 5, 7, 30, 31 and 34)	44,763	17
Investments in associates and joint ventures (Note 13)	14,478,228	12,753,226
Deferred tax assets, net (Note 28)	152,950	123,075
Non-current other assets (Note 9)	9,419	8,541
Property, plant and equipment, net (Note 10)	1,877,748	1,911,540
Investment property, net (Note 11)	1,416,911	1,241,544
Intangible assets (Note 12)	99,839	94,394
Total non-current assets	18,222,826	16,279,888
TOTAL ASSETS	₩ 22,835,911	₩ 21,647,697

(Continued)

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
AS OF DECEMBER 31, 2018 AND 2017 (CONTINUED)

	Korean won	
	December 31, 2018	December 31, 2017
	(In millions)	
LIABILITIES AND EQUITY		
CURRENT LIABILITIES:		
Current derivative liabilities (Notes 5 and 34)	₩ 181	₩ 1,982
Trade payables (Notes 5, 30 and 34)	1,634,670	2,261,617
Other payables (Notes 5, 30 and 34)	569,199	678,813
Short-term borrowings (Notes 5, 14 and 34)	72,956	59,086
Current portion of debentures and long-term borrowings (Notes 5, 14 and 34)	161,526	320,726
Current tax liabilities	186,938	196,819
Provisions (Note 15)	52,430	62,766
Other current liabilities (Notes 17 and 18)	361,631	310,840
Liabilities related to assets held for sale (Note 38)	-	50,959
Total current liabilities	3,039,531	3,943,608
NON-CURRENT LIABILITIES:		
Non-current derivative liabilities (Notes 5 and 34)	-	-
Other payables (Notes 5, 30 and 34)	77,743	59,854
Long-term borrowings (Notes 5, 14 and 34)	1,285,055	1,012,845
Net defined benefit liability (Note 16)	10,402	12,697
Deferred tax liability (Note 28)	213,536	401,631
Provisions (Note 15)	5,025	4,388
Other non-current liabilities (Note 17)	40,141	33,163
Total non-current liabilities	1,631,902	1,524,578
TOTAL LIABILITIES	4,671,433	5,468,186
EQUITY:		
Equity attributable to the owners of the parent company:	17,998,725	16,002,559
Issued capital (Note 19)	879,359	879,359
Capital surplus (Note 20)	2,365,545	2,365,549
Other capital items (Note 19)	(2,385)	(2,385)
Accumulated other comprehensive income (loss) (Note 21)	(292,418)	(250,370)
Retained earnings (Note 22)	15,048,624	13,010,406
Non-controlling interests	165,753	176,952
TOTAL EQUITY	18,164,478	16,179,511
TOTAL LIABILITIES AND EQUITY	₩ 22,835,911	₩ 21,647,697

(Concluded)

See accompanying notes.

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF PROFIT OR LOSS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won			
	Year ended December 31, 2018		Year ended December 31, 2017	
	(In millions)			
Revenue and gain (loss) on valuation by equity method (Notes 4 and 23):				
Sales of finished goods and merchandise	₩	4,902,745	₩	4,771,625
Service revenue		1,965,189		1,940,193
Construction revenue		3,340,368		3,096,587
Gain (loss) on valuation by equity method		1,269,966		1,577,093
Other revenue		466,522		455,560
		11,944,790		11,841,058
Cost of sales (Notes 23 and 24)		9,557,828		9,293,904
Gross profit		2,386,962		2,547,154
Selling and administrative expenses (Notes 23 and 24)		423,159		361,334
Operating income		1,963,803		2,185,820
Financial income (Note 25)		35,619		25,200
Financial expenses (Note 25)		48,936		50,850
Other non-operating income (Note 26)		55,525		644,156
Other non-operating expenses (Note 26)		75,864		63,020
Profit before income tax from continuing operations		1,930,147		2,741,306
Income tax expense from continuing operations (Note 28)		47,337		328,641
Profit from continuing operations		1,882,810		2,412,665
Profit from discontinued operations (Note 37)		87		22,894
Profit for the year	₩	1,882,897	₩	2,435,559
Profit for the year attributable to:				
Owners of the parent company	₩	1,863,881	₩	2,395,905
Non-controlling interests		19,016		39,654
Earnings per share (in Korean won):				
Continuing and discontinued operations:				
Common Stock - Basic/Diluted (Note 29)	₩	10,603	₩	13,630
Pre-1996 Commercial Law Amendment Preferred Stock - Basic/Diluted (Note 29)		10,653		13,680
Continuing operations:				
Common Stock - Basic/Diluted (Note 29)	₩	10,603	₩	13,603
Pre-1996 Commercial Law Amendment Preferred Stock - Basic/Diluted (Note 29)		10,653		13,653

See accompanying notes.

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won			
	Year ended December 31, 2018		Year ended December 31, 2017	
	(In millions)			
Profit for the year	₩	1,882,897	₩	2,435,559
Other comprehensive income (loss):				
Items that may be reclassified subsequently to profit or loss				
Net gain (loss) on other financial assets		-		20,666
Net gain (loss) on changes in valuation of investments using equity method		(48,431)		(78,541)
Net gain (loss) on derivative instruments entered into for cash flow hedges		1,966		427
Overseas operations translation		17,454		(34,307)
Items that will not be reclassified subsequently to profit or loss:				
Net gain (loss) on other financial assets		(6,031)		-
Remeasurement of net defined benefit liability		(9,201)		16,658
Increase (decrease) in retained earnings of equity method investments		(42,738)		34,771
Total comprehensive income for the year	₩	1,795,916	₩	2,395,233
Total comprehensive income attributable to:				
Owners of the parent company	₩	1,777,355	₩	2,356,369
Non-controlling interests		18,561		38,864

See accompanying notes.

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won						
	Issued capital	Capital surplus	Other capital items	Accumulated other comprehensive income (loss)	Retained earnings	Non-controlling interests	Total
				(In millions)			
Balance as of January 1, 2017	₩ 879,359	₩ 2,364,937	₩ (2,385)	₩ (159,606)	₩10,792,060	₩ 345,719	₩ 14,220,084
Profit (loss) for the year	-	-	-	-	2,395,905	39,654	2,435,559
Net gain (loss) on Other financial assets	-	-	-	20,680	-	(14)	20,666
Valuation through equity method	-	-	-	(78,745)	35,312	(337)	(43,770)
Valuation on derivative instruments entered into for cash flow hedges	-	-	-	314	-	113	427
Remeasurements of the net defined benefit liability	-	-	-	-	16,511	147	16,658
Overseas operations translation	-	-	-	(33,608)	-	(699)	(34,307)
Annual dividends	-	-	-	-	(228,668)	(14,361)	(243,029)
Changes in the shares of subsidiaries		612	-	595	(714)	(193,270)	(192,777)
Balance as of December 31, 2017	₩ 879,359	₩ 2,365,549	₩ (2,385)	₩ (250,370)	₩13,010,406	₩ 176,952	₩ 16,179,511
Balance as of January 1, 2018	₩ 879,359	₩ 2,365,549	₩ (2,385)	₩ (250,370)	₩13,010,406	₩ 176,952	₩ 16,179,511
Effect of accounting policy change							
Effect of accounting policy change of subsidiaries	-	-	-	(1,796)	1,796	-	-
Equity method effect due to changes in accounting policies of related companies	-	-	-	(5,476)	452,959	-	447,483
Amount rewritten after revosion	₩ 879,359	₩ 2,365,549	₩ (2,385)	(257,642)	13,465,161	176,952	16,626,994
Profit (loss) for the year	-	-	-	-	1,863,881	19,016	1,882,897
Net gain (loss) on Other financial assets	-	-	-	(5,912)	-	(119)	(6,031)
Valuation through equity method	-	-	-	(48,260)	(42,632)	(277)	(91,169)
Valuation on derivative instruments entered into for cash flow hedges	-	-	-	1,966	-	-	1,966
Remeasurements of the net defined benefit liability	-	-	-	-	(9,118)	(83)	(9,201)
Overseas operations translation	-	-	-	17,430	-	24	17,454
Annual dividends	-	-	-	-	(228,668)	(2,757)	(231,425)
Changes in the shares of subsidiaries	-	(4)	-	-	-	(27,003)	(27,007)
Balance as of December 31, 2018	₩ 879,359	₩ 2,365,545	₩ (2,385)	₩ (292,418)	₩15,048,624	₩ 165,753	₩ 18,164,478

See accompanying notes.

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

	Korean won	
	Year ended December 31, 2018	Year ended December 31, 2017
	(In millions)	
CASH FLOWS FROM OPERATING ACTIVITIES:		
Profit for the year	₩ 1,882,897	₩ 2,435,559
Additions of expenses not involving cash outflows:		
Salaries and bonuses	1,172	1,081
Retirement benefits	27,317	41,824
Depreciation	153,390	229,368
Amortization of intangible assets	22,527	28,052
Loss on valuation of inventories	261	3,318
Bad debt expenses	9,916	10,900
Accrual of provision	29,398	43,576
Impairment loss on property, plant and equipment	75	17,208
Impairment loss on intangible assets	879	1,785
Loss on foreign currency translation	8,169	19,249
Loss on disposals of property, plant and equipment	448	2,753
Loss on disposals of investment property	-	348
Loss on disposals of intangible assets	716	808
Loss on disposals of other assets	-	522
Loss on transactions of derivatives	13,467	10,791
Loss on valuation of derivatives	5,424	1,836
Interest expenses	43,794	53,056
Loss on valuation of other financial assets	292	-
Loss on disposals of other financial assets	1	-
Impairment loss on other financial assets	-	316
Loss on disposals of investments in subsidiaries	625	83
Loss on disposals of investments in associates	-	32
Impairment loss on investments in associates	23,680	1,169
Income tax expense	47,280	343,271
Others	4,097	7,875
	392,928	819,221
Deduction of items not involving cash inflows:		
Reversal of salary and bonus	34	-
Reversal of impairment loss on inventories	152	988
Reversal of allowance for doubtful accounts	1,726	933
Reversal of provisions	6,188	3,892
Gain on foreign currency translation	4,767	9,433
Gain on disposals of property, plant and equipment	1,153	1,128
Gain on disposals of investment property	-	938
Gain on disposals of intangible assets	226	22
Gain on transactions of derivatives	7,381	14,486
Gain on valuation of derivatives	1,271	1,763
Interest income	24,072	20,302
Dividend income	2,278	2,077

(Continued)

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017 (CONTINUED)

	Korean won	
	Year ended December 31, 2018	Year ended December 31, 2017
	(In millions)	
Gain on valuation of other financial assets	₩ 108	₩ -
Gain on disposals of investments in subsidiaries	20,543	411,025
Gain on disposals of investments in associates	718	186,509
Gain on valuation by equity method	1,269,966	1,577,093
Others	660	275
	(1,341,243)	(2,230,864)
Movements in working capital:		
Trade receivables	207,382	(690,570)
Other receivables	3,729	(13,925)
Inventories	(6,719)	(47,756)
Non-current trade receivables	(1,088)	(26,350)
Non-current other receivables	27	(622)
Trade payables	(584,857)	708,918
Other payables	(39,666)	(29,065)
Non-current other payables	-	(21)
Provisions	(19,208)	(26,818)
Net defined benefit liability	(40,691)	(38,806)
Others	25,341	110,123
	(455,750)	(54,892)
Interest income received	24,369	18,590
Dividend income received	340,336	262,870
Income tax received	(316)	-
Interest expenses paid	(35,324)	(37,098)
Income taxes paid	(312,954)	(154,945)
Net cash provided by operating activities	494,943	1,058,441

(Continued)

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017 (CONTINUED)

	Korean won	
	Year ended December 31, 2018	Year ended December 31, 2017
	(In millions)	
CASH FLOWS FROM INVESTING ACTIVITIES:		
Cash inflows from investing activities:		
Decrease in financial institution deposits	₩ 782,317	₩ 735,916
Settlement of derivative instruments	7,365	14,436
Decrease in other receivables	22,536	35,632
Disposals of other financial assets	743	346
Decrease in non-current other receivables	32	1,374
Disposals of investments in subsidiaries	43,453	505,046
Disposals of property, plant and equipment	27,760	32,894
Disposals of investment property	2,444	9,850
Disposals of intangible assets	1,019	2,806
Disposals of assets (liabilities) held for sale	-	26,279
Acquisition control of subsidiaries	4,114	-
Others	822	-
	892,605	1,364,579
Cash outflows for investing activities:		
Increase in financial institution deposits	692,941	994,159
Settlements of derivative instruments	13,600	12,899
Increase in other receivables	17,782	13,455
Acquisitions of non-current AFS financial assets	2,910	406
Increase in non-current other receivables	4,707	3,337
Acquisitions of investments in associates	424,530	319,167
Acquisitions of property, plant and equipment	263,549	292,094
Acquisitions of investment property	98,776	389,187
Acquisitions of intangible assets	32,413	29,160
Others	30	-
	(1,551,238)	(2,053,864)
Net cash used in investing activities	(658,633)	(689,285)

(Continued)

LG CORP. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017 (CONTINUED)

	Korean won	
	Year ended December 31, 2018	Year ended December 31, 2017
	(In millions)	
CASH FLOWS FROM FINANCING ACTIVITIES:		
Cash inflows from financing activities:		
Proceeds from short-term borrowings	₩ 54,364	₩ 549,909
Proceeds from long-term borrowings	32,629	139,021
Increase in other long-term liabilities	-	35
Issuance of debentures	368,585	458,108
Increase in government subsidy	594	237
Cash inflows from consolidated capital transactions	-	200
	456,172	1,147,510
Cash outflows for financing activities:		
Redemptions of short-term borrowings	29,783	539,615
Redemptions of long-term borrowings	-	22,500
Redemptions of debentures	240,000	320,000
Redemptions of current portion of long-term borrowings	81,364	161,952
Disposals of derivative instruments	-	249
Payments of dividends	231,410	242,787
Acquisitions of treasury stocks	-	75
Cash outflows from consolidated capital transactions	29	-
Others	-	147
	(582,586)	(1,287,325)
Net cash used in financing activities	(126,414)	(139,815)
Net change in cash and cash equivalents	(290,104)	229,341
Cash and cash equivalents at beginning of year	1,342,871	1,129,035
Effects of exchange rate changes on cash and cash equivalents	1,526	(15,505)
Cash and cash equivalents at end of year	₩ 1,054,293	₩ 1,342,871

(Concluded)

See accompanying notes.

1. GENERAL:

In accordance with Korean International Financial Reporting Standards ("K-IFRSs") 1110 (Consolidated Financial Statements), LG Corp. (the "Company") is the parent company and an investment holding company. In order to become a global competitor through effective management and to confront changes in domestic and international business environments, the Company acquired LG Electronics Inc., an investment company, and the real estate lease and investment business of Serveone Co., Ltd. on March 1, 2003.

The Company has been listed on the Korea Exchange stock market since February 1970. After numerous paid-up capital increases, spin-offs and mergers, the outstanding capital stock amounted to ₩879,359 million, including preferred stocks of ₩16,573 million as of December 31, 2018.

As of December 31, 2018, the Company's related parties and major shareholders are as follows:

Names of shareholders	Number of shares	Percentage of shares (%) (*)
Ku, Gwang Mo	25,881,884	14.72
Ku, Bon Jun	13,317,448	7.57
Ku, Bon Shik	7,728,609	4.39
Kim, Young Shik	7,253,100	4.12
Ku, Bon Neung and others	21,899,938	12.45
LG Yonam Education Foundation	3,675,742	2.09
LG Yonam Foundation	572,525	0.33
Others	95,542,562	54.33
Total	175,871,808	100.00

(*) Includes preferred stocks

2. STANDARDS AFFECTING PRESENTATION AND DISCLOSURE AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

The consolidated financial statements have been confirmed at the board of directors' meeting held on February 8, 2019, and will be finalized at the shareholders' meeting on March 26, 2019.

The Company and its subsidiaries (the "Group") have prepared the consolidated financial statements in accordance with K-IFRSs.

The significant accounting policies under K-IFRSs followed by the Group in the preparation of its consolidated financial statements are summarized below. Unless stated otherwise, these accounting policies have been applied consistently to the Group's consolidated financial statements for the current period and the comparative prior period.

Consolidated financial statements were prepared on a historical cost basis, except for certain non-current assets and financial assets measured at revalued amounts or fair values at the end of each reporting period as described in the accounting policies below. Historical costs are generally measured at the fair value of the consideration paid to acquire the asset.

Fair value is the price that will be received by selling assets or paying liabilities in normal transactions between market participants at the measurement date, regardless of whether the prices are directly observable or estimated using valuation techniques. In estimating the fair value of an asset or liability, the Group considers the characteristics of the asset or liability that market participants consider when pricing the asset or liability at the measurement date. Except for measurements that are somewhat similar to fair value, but are not fair value, fair value of share-based payment transactions within the scope of K-IFRS 1102 Share-based Payment, lease transactions within the scope of

K-IFRS 1017 Leases, the net realizable value of K-IFRS 1002 Inventories and Inventories or value in use in K-IFRS 1036 Impairment of Assets are determined in accordance with the principles described above for measurement or disclosure purposes.

(1) Established or revised accounting standards

1) Amendments to K-IFRSs and new interpretations that are mandatorily effective for the current year

- K-IFRS 1109 – Financial Instruments (Enactment)
The Group has applied K-IFRS 1109 Financial Instruments and the related consequential amendments to other K-IFRSs that are effective for an annual period that begins on or after January 1, 2018.
K-IFRS 1109 introduced new requirements for:

1) the classification and measurement of financial assets and financial liabilities,
2) impairment of financial assets and
3) general hedge accounting.

Additionally, the Group adopted consequential amendments to K-IFRS 1107 Financial Instruments: Disclosures that were applied to the disclosures for 2018.

When the Group first applied this K-IFRS, it chose not to restate the prior period and, therefore, did not restate the comparative consolidated financial statements.

The main contents of the new regulations and their impact on the consolidated financial statements of the Group are as follows:

1.1 Classification and measurement of financial assets
All recognized financial assets that are within the scope of K-IFRS 1109 are required to be measured subsequently at amortized cost or fair value on the basis of the entity's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets.

- Debt instruments that are held within a business model whose objective is to collect the contractual cash flows, and that have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding, are measured subsequently at amortized cost.
- Debt instruments that are held within a business model whose objective is both to collect the contractual cash flows and to sell the debt instruments, and that have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding, are measured subsequently at fair value through other comprehensive income ("FVTOCI").
- all other debt investments and equity investments are measured subsequently at fair value through profit or loss ("FVTPL").

Despite the foregoing, the Group may make the following irrevocable election / designation at initial recognition of a financial asset:

- The Group may irrevocably elect to present subsequent changes in fair value of an equity investment that is neither held for trading nor contingent consideration recognized by an acquirer in a business combination in other comprehensive income.
- The Group may irrevocably designate a debt investment that meets the amortized cost or FVTOCI criteria as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch.

In the current year, the Group has not designated any debt investments that meet the amortized cost or FVTOCI criteria as measured at FVTPL.

When a debt investment measured at FVTOCI is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment. When an equity investment designated as measured at FVTOCI is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is subsequently transferred to retained earnings.

Debt instruments that are measured subsequently at amortized cost or at FVTOCI are subject to impairment. See (1.2) below.

The directors of the Company reviewed and assessed the Group's existing financial assets as at January 1, 2018, based on the facts and circumstances that existed at that date and concluded that the initial application of K-IFRS 1109 has had the following impact on the Group's financial assets with regard to their classification and measurement:

- The Group's investments in redeemable notes were classified as AFS financial assets under K-IFRS 1039 Financial Instruments: Recognition and Measurement. The notes have been reclassified as financial assets at amortized cost because they are held within a business model whose objective is to collect the contractual cash flows and they have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding.
- The Group's investment in corporate bonds that were classified as AFS financial assets under K-IFRS 1039 have been classified as financial assets at FVTOCI because they are held within a business model whose objective is both to collect contractual cash flows and to sell the bonds, and they have contractual cash flows that are solely payments of principal and interest on principal outstanding. The change in the fair value of these redeemable notes continues to accumulate in the investment revaluation reserve until they are derecognized or reclassified.
- The Group's investments in equity instruments (neither held for trading nor a contingent consideration arising from a business combination) that were previously classified as AFS financial assets and were measured at fair value at each reporting date under K-IFRS 1109 have been designated as at FVTOCI. The change in fair value of these equity instruments continues to be accumulated in the investment revaluation reserve.
- There is no change in the measurement of the Group's investments in equity instruments that are held for trading; those instruments were and continue to be measured at FVTPL.
- Financial assets classified as held to maturity and loans and receivables under K-IFRS 1039 that were measured at amortized cost continue to be measured at amortized cost under K-IFRS 1109 as they are held within a business model to collect contractual cash flows and these cash flows consist solely of payments of principal and interest on the principal amount outstanding.

Note (1.5) below tabulates the change in classification of the Group's financial assets upon application of K-IFRS 1109.

The change in classification of the investment in redeemable notes has resulted in the fair value gain on AFS financial assets of ₩1,796 million, accumulated in revaluation reserve, being reclassified to the carrying value of the redeemable notes on the initial application date.

None of the other reclassifications of financial assets have had any impact on the Group's financial position, profit or loss, other comprehensive income or total comprehensive income in the current year.

As a result of the classification and measurement of K-IFRS 1109, ₩6,114 million has been recognized as an item of basic retained earnings, and (-)₩5,476 million has been recognized in other comprehensive income. It has been reflected as an item.

1.2 Impairment of financial assets

In relation to the impairment of financial assets, K-IFRS 1109 requires an expected credit loss ("ECL") model as opposed to an incurred credit loss model under K-IFRS 1039. The ECL model requires the Group to account for ECLs and changes in those ECLs at each reporting date to reflect changes in credit risk since initial recognition of the financial assets. In other words, it is no longer necessary for a credit event to have occurred before credit losses are recognized.

Specifically, K-IFRS 1109 requires the Group to recognize a loss allowance for ECLs on:
(1) Debt investments measured subsequently at amortized cost or at FVTOCI,
(2) Lease receivables,
(3) Trade receivables and contract assets, and
(4) Financial guarantee contracts to which the impairment requirements of K-IFRS 1109 apply.

In particular, K-IFRS 1109 requires the Group to measure the loss allowance for a financial instrument at an amount equal to the lifetime ECLs if the credit risk on that financial instrument has increased significantly since initial recognition, or if the financial instrument is a purchased or originated credit-impaired financial asset. However, if the credit risk on a financial instrument has not increased significantly since initial recognition (except for a purchased or originated credit-impaired financial asset), the Group is required to measure the loss allowance for that financial instrument at an amount equal to 12-month ECL. K-IFRS 1109 also requires a simplified approach for measuring the loss allowance at an amount equal to lifetime ECL for trade receivables, contract assets and lease receivables in certain circumstances.

The Group has assessed whether there has been a significant increase in credit risk since initial recognition of financial instruments that remain recognized on the date of initial application of K-IFRS 1109 (i.e., January 1, 2018), and the directors have assessed the credit risk of the respective financial instruments on the date of their initial recognition.

As a result of the adoption of K-IFRS 1109, (-) ₩638 million related to investments in associates has been reflected as retained earnings.

The consequential amendments to K-IFRS 1107 have also resulted in more extensive disclosures about the Group’s exposure to credit risk in the consolidated financial statements (see Note 34).

1.3 Classification and measurement of financial liabilities

A significant change introduced by K-IFRS 1109 in the classification and measurement of financial liabilities relates to the accounting for changes in the fair value of a financial liability designated as at FVTPL attributable to changes in the credit risk of the issuer.

Specifically, K-IFRS 1109 requires that the changes in the fair value of the financial liability that is attributable to changes in the credit risk of that liability be presented in other comprehensive income, unless the recognition of the effects of changes in the liability’s credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. Changes in fair value attributable to a financial liability’s credit risk are not subsequently reclassified to profit or loss, but are instead transferred to retained earnings when the financial liability is derecognized. Previously, under K-IFRS 1039, the entire amount of the change in the fair value of the financial liability designated as at FVTPL was presented in profit or loss.

The adoption of K-IFRS 1109 has no significant effect on the classification and measurement of financial liabilities of the Group.

1.4 General hedge accounting

The new general hedge accounting requirements retain the three types of hedge accounting. However, greater flexibility has been introduced to the types of transactions eligible for hedge accounting, specifically broadening the types of instruments that qualify for hedging instruments and the types of risk components of non-financial items that are eligible for hedge accounting. In addition, the effectiveness test has been replaced with the principle of an ‘economic relationship.’ Retrospective assessment of hedge effectiveness is also no longer required. Enhanced disclosure requirements about the Group’s risk management activities have also been introduced.

In accordance with K-IFRS 1109’s transition provisions for hedge accounting, the Group has applied the K-IFRS 1109 hedge accounting requirements prospectively from the date of initial application on January 1, 2018. The Group’s qualifying hedging relationships in place as at January 1, 2018, also qualify for hedge accounting in accordance with K-IFRS 1109 and were, therefore, regarded as continuing hedging relationships. No rebalancing of any of the hedging relationships was necessary on January 1, 2018. As the critical terms of the hedging instruments match those of their corresponding hedged items, all hedging relationships continue to be effective under K-IFRS 1109’s effectiveness assessment requirements. The Group has also not designated any hedging relationships under K-IFRS 1109 that would not have met the qualifying hedge accounting criteria under K-IFRS 1039.

K-IFRS 1109 requires hedging gains and losses to be recognized as an adjustment to the initial carrying amount of non-financial hedged items (basis adjustment). In addition, transfers from the hedging reserve to the initial carrying amount of the hedged item are not reclassification adjustments under K-IFRS 1001, Presentation of Financial Statements, and hence they do not affect other comprehensive income. Hedging gains and losses subject to basis adjustments are categorized as amounts that will not be subsequently reclassified to profit or loss in other comprehensive income. This is consistent with the Group's practice prior to the adoption of K-IFRS 1109.

Consistent with prior periods, when a forward contract is used in a cash flow hedge or fair value hedge relationship, the Group has designated the change in fair value of the entire forward contract, i.e., including the forward element as the hedging instrument.

The application of the K-IFRS 1109 hedge accounting requirements has had no other impact on the results and financial position of the Group for the current year. Please refer to Note 34 for detailed disclosures regarding the Group's risk management activities.

1.5 Disclosures in relation to the initial application of K-IFRS 1109

There were no financial assets or financial liabilities which the Group had previously designated as at FVTPL under K-IFRS 1039 that were subject to reclassification or which the Group has elected to reclassify upon the application of K-IFRS 1109. There were no financial assets or financial liabilities which the Group has elected to designate as at FVTPL at the date of initial application of K-IFRS 1109.

The table below shows information relating to financial assets and financial liabilities that have been reclassified as a result of transition to K-IFRS 1109 and K-IFRS 1039 (Unit: Korean won in millions):

	Category		Book Value		
	K-IFRS 1039	K-IFRS 1109	K-IFRS 1039	Re-measurement	K-IFRS 1109
Marketable equity securities (*1)	AFS financial assets	Financial assets measured at FVTOCI	46,875	-	46,875
Unmarketable equity securities (*1)	AFS financial assets	Financial assets measured at FVTPL	69,728	-	4,524 65,204
Debt securities (*2)	AFS financial assets	Financial assets measured at FVTOCI	5,214	-	5,214
		Financial assets measured at FVTPL			
Derivative assets for trading purposes	Financial assets at FVTPL	Financial assets measured at FVTPL	1,716	-	1,716
Derivative assets designated as hedging instruments	Hedge derivative assets	Derivative assets designated as hedging instrument:	82	-	82
Financial institution deposits	Loan and receivable	Financial assets (liabilities) measured at amortized cost	438,214	-	438,214
Trade receivables and other receivables	Loan and receivable	Financial Assets(liabilities) measured at amortized cost	3,132,871	-	3,132,871
Derivative liabilities for trading purposes	Financial liabilities at FVTPL	Financial assets measured at FVTPL	1,864	-	1,864
Derivative liabilities designated as hedging instruments	Hedge derivative liability	Derivative assets designated as hedging instrument:	118	-	118
Trade payables and other accounts payable	Amortized cost measurement financial liability	Financial assets (liabilities) measured at amortized cost	3,000,284	-	3,000,284
Borrowings and debentures	Amortized cost measurement financial liability	Financial assets (liabilities) measured at amortized cost	1,392,657	-	1,392,657

(*1) Among AFS financial assets as of and for the year ended December 31, 2017, marketable equity securities and unmarketable equity securities were designated as financial assets measured at FVTOCI by applying the irrevocable election at the date of initial application.
(*2) The available-for-put financial instruments were classified as unmarketable equity securities at the year ended December 31, 2017, but classified financial assets were measured at FVTPL by applying the debt securities of K-IFRS 1109.

- K-IFRS 1115 – Revenue from Contracts with Customers (Enactment)

In the current year, the Group has applied K-IFRS 1115, Revenue from Contracts with Customers, which is effective for an annual period that begins on or after January 1, 2018. K-IFRS 1115 introduced a five-step approach to revenue recognition. Far more prescriptive guidance has been added in K-IFRS 1115 to deal with specific scenarios. Details of the new requirements as well as their impact on the Group's consolidated financial statements are described below.

The Group has applied K-IFRS 1115 in accordance with the fully retrospective transitional approach using the expedient in K-IFRS 1115 allowing both non-disclosure of the amount of the transaction price allocated to the remaining performance obligations, and an explanation of when it expects to recognize that amount as revenue for all reporting periods presented before the date of initial application, i.e., January 1, 2018.

- K-IFRS 1102—Share-Based Payment (Amendment)

The amendments include: 1) when measuring the fair value of share-based payment, the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payment should be consistent with the measurement of equity-settled share-based payment; 2) share-based payment transaction in which the Group settles the share-based payment arrangement net by withholding a specified portion of the equity instruments per statutory tax withholding requirements would be classified as equity settled in its entirety, if otherwise would be classified as equity settled without the net settlement feature; and 3) when a cash-settled share-based payment changes to an equity-settled share-based payment because of modifications of the terms and conditions, the original liability recognized is derecognized and the equity-settled share-based payment is recognized at the modification-date fair value. Any difference between the carrying amount of the liability at the modification date and the amount recognized in equity at the same date would be recognized in profit and loss immediately. The application of K-IFRS 1102 has not had a significant impact on the financial position and/or financial performance of the Group.

- K-IFRS 1040—Transfers of Investment Property (Amendment)

The amendments clarify that a transfer to, or from, investment property necessitates an assessment of whether a property meets, or has ceased to meet, the definition of investment property, supported by observable evidence that a change in use has occurred. The amendments further clarify that situations other than the ones listed in K-IFRS 1040 may evidence a change in use, and that a change in use is possible for properties under construction (i.e., a change in use is not limited to completed properties). The application of K-IFRS 1040 has not had a significant impact on the financial position and/or financial performance of the Group.

- K-IFRS 2122—Foreign Currency Transactions and Advance Consideration (Enactment)

The interpretation addresses how to determine the 'date of transaction' for the purpose of determining the exchange rate to use on initial recognition of an asset, expense or income, when consideration for that item has been paid or received in advance in a foreign currency, which resulted in the recognition of a non-monetary asset or non-monetary liability (e.g., a non-refundable deposit or deferred revenue).

The interpretation specifies that the date of transaction is the date on which the entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration. If there are multiple payments or receipts in advance, the interpretation requires an entity to determine the date of transaction for each payment or receipt of advance consideration.

The Group does not anticipate that the application of the enactment in the future will have an impact on the Group's consolidated financial statements because the Group already accounts for transactions involving the payment or receipt of advance consideration in a foreign currency in a way that is consistent with the enactment.

- Annual Improvements to K-IFRSs 2014-2016 Cycle

The annual improvements include amendments to K-IFRS 1101, First-Time Adoption, and K-IFRS 1028, Investment in Associates and Joint Ventures. The amendments to K-IFRS 1028 clarify that the option for a venture capital organization and other similar entities to measure investments in associates and joint ventures at FVTPL is available separately for each associate or joint venture, and that election should be made at initial recognition of the associate or joint venture. In respect of the option for an entity that is not an investment entity (IE) to retain the fair value measurement applied by its associates and joint ventures that are IEs when applying the equity method, the amendments make a similar clarification that this choice is available for each IE associate or IE joint venture.

The Group does not anticipate that the application of the amendments in the future will have any impact on the Group's consolidated financial statements as the Group is neither a first-time adopter of K-IFRS nor a venture capital organization. Furthermore, the Group does not have any associate or joint venture that is an IE.

The impact of changes in accounting policies on the consolidated financial statements due to newly introduced standards and interpretations from the current term is as follows (Unit: Korean won in millions):

Category	2018-01-01		
	Before change	Adjustments	After changing
CURRENT ASSETS	5,367,809	1,065	5,368,874
Unincorporated construction	198,757	(198,757)	-
Contract asset	-	199,822	199,822
Other current assets with no financial impact	5,169,052	-	5,169,052
NON-CURRENT ASSETS	16,279,888	470,185	16,750,073
Investments in associates and joint ventures	12,753,226	470,185	13,223,411
Other non-current assets with no financial impact	3,526,662	-	3,526,662
TOTAL ASSETS	21,647,697	471,250	22,118,947
CURRENT LIABILITIES	3,943,608	1,065	3,944,673
Overcharged construction	107,745	(107,745)	-
Contract liability	-	106,733	106,733
Provisions	62,766	2,077	64,843
Other current liabilities with no financial impact	3,773,097	-	3,773,097
NON-CURRENT LIABILITIES	1,524,578	22,702	1,547,280
Deferred tax liability	401,631	22,702	424,333
Other non-current liabilities with no financial impact	1,122,947	-	1,122,947
TOTAL LIABILITIES	5,468,186	23,767	5,491,953
Accumulated other comprehensive income (loss)	(250,370)	(7,272)	(257,642)
Retained earnings	13,010,406	454,755	13,465,161
Other equity with no financial impact	3,419,475	-	3,419,475

On the other hand, the effect of these changes on each item of equity as of the date of initial application is as follows:

Category	Capital attributable to owners of the parent company				
	Retained earnings	Accumulated other comprehensive income (loss)	Other equity with no financial impact	Non-controlling interests	Total
December 31, 2017 (amount reported)	13,010,406	(250,370)	3,242,523	176,952	16,179,511
First-time adoption of K-IFRS 1109 (*)	8,170	(7,558)	-	-	612
Effect of income tax on the effect of introduction	(260)	286	-	-	26
Subtotal	7,910	(7,272)	-	-	638
First-time adoption of K-IFRS 1115 (*)	469,573	-	-	-	469,573
Effect of income tax on the effect of introduction	(22,728)	-	-	-	(22,728)
Subtotal	446,845	-	-	-	446,845
January 1, 2018 (first application date)	13,465,161	(257,642)	3,242,523	176,952	16,626,994

(*) The effects are mainly due to the effects of changes in accounting policies of associates and joint ventures held by the Group.

2) New and revised K-IFRSs in issue, but not yet effective

(1) General impact of application of K-IFRS 1116—Leases

K-IFRS 1116 provides a comprehensive model for the identification of lease arrangements and their treatments in the financial statements for both lessors and lessees. K-IFRS 1116 will supersede the current lease guidance, including K-IFRS 1017, Leases, and the related interpretations when it becomes effective for accounting periods beginning on or after January 1, 2019. The date of initial application of K-IFRS 1116 for the Group will be January 1, 2019.

The lessees have an option to choose between the full retrospective application for each reporting date and modified retrospective application at the initial application date.

The Group plans to apply the modified retrospective approach as of January 1, 2019, in accordance with K-IFRS 1116. Therefore, the cumulative effect of applying K-IFRS 1116 will be adjusted in the retained earnings (or, where appropriate, other components of equity) at the date of initial application, and the comparative consolidated financial statements will not be restated.

The lessee and lessor must account for each lease element of the lease, separate from the non-lease element in a lease contract. The lessee is required to recognize lease assets and liabilities that represents the right to use the underlying assets and the obligation to pay the lease payments. However, in the case of short-term lease and small-value-based lease, the exemption provisions of the standard may be selected. In addition, the lessee is not required to separate the lease component from the non-lease component in accordance with the simplified approach, and can account for each lease component and related non-lease component as one lease component.

In contrast to lessee accounting, K-IFRS 1116 substantially carries forward the lessor accounting requirements in K-IFRS 1117.

(2) Identification of lease

The Group will make use of the practical expedient available on transition to K-IFRS 1116 not to reassess whether a contract is or contains a lease. Accordingly, the definition of a lease in accordance with K-IFRS 1117 will continue to apply to those leases entered or modified before January 1, 2019.

The change in definition of a lease mainly relates to the concept of control. K-IFRS 1116 distinguishes between leases and service contracts on the basis of whether the use of an identified asset is controlled by the customer. Control is considered to exist if the customer has:

- the right to obtain substantially all of the economic benefits from the use of an identified asset; and
- the right to direct the use of that asset.

The project has shown that the new definition in K-IFRS 1116 will not change significantly the scope of contracts that meet the definition of a lease for the Group.

(3) Impact on Lessee Accounting

a. Operating leases

K-IFRS 1116 will change how the Group accounts for leases previously classified as operating leases under K-IFRS 1017, which were off balance sheet. On initial application of K-IFRS 1116, for all leases (except as noted below), the Group will:

a) recognize right-of-use assets and lease liabilities in the consolidated statements of financial position, initially measured at the present value of the future lease payments;
b) recognize depreciation of right-of-use assets and interest on lease liabilities in the consolidated statements of profit or loss; and
c) separate the total amount of cash paid into a principal portion (presented within financing activities) and interest (presented within operating activities) in the consolidated statements of cash flows.

Under K-IFRS 1116, right-of-use assets will be tested for impairment in accordance with K-IFRS 1036, Impairment of Assets. This will replace the previous requirement to recognize a provision for onerous lease contracts.

For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as personal computers and office furniture), the Group will opt to recognize a lease expense on a straight-line basis as permitted by K-IFRS 1116.

The Group is analyzing the effect of the introduction of this standard on its consolidated financial statements.

b. Finance leases

The main difference between K-IFRS 1116 and K-IFRS 1017 with respect to assets formerly held under a finance lease is the measurement of the residual value guarantees provided by the lessee to the lessor. K-IFRS 1116 requires that the Group recognize as part of its lease liability only the amount expected to be payable under a residual value guarantee, rather than the maximum amount guaranteed as required by K-IFRS 1017. On initial application, the Group will present equipment previously included in property, plant and equipment within the line item for right-of-use assets and the lease liability, previously presented within borrowing, will be presented in a separate line for lease liabilities.

Based on an analysis of the Group’s finance leases as at December 31, 2018, on the basis of the facts and circumstances that exist at that date, the directors of the Company have assessed that the impact of this change will not have an impact on the amounts recognized in the Group’s consolidated financial statements.

(4) Impact on Lessor Accounting

Under K-IFRS 1116, a lessor continues to classify leases as either finance leases or operating leases and account for those two types of leases differently. However, K-IFRS 1116 has changed and expanded the disclosures required, in particular regarding how a lessor manages the risks arising from its residual interest in leased assets.

Under K-IFRS 1116, an intermediate lessor accounts for the head lease and the sublease as two separate contracts. The intermediate lessor is required to classify the sublease as a finance or operating lease by reference to the right-of-use asset arising from the head lease (and not by reference to the underlying asset as was the case under K-IFRS 1017).

Because of this change, the Group will reclassify certain of its sublease agreements as finance leases. As required by K-IFRS 1109, an allowance for ECLs will be recognized on the finance lease receivables. The leased assets will be derecognized and finance lease asset receivables recognized. This change in accounting will change the timing of recognition of the related revenue (recognized in finance income).

- K-IFRS 1109 – Prepayment Features with Negative Compensation (Amendment)

The amendments to K-IFRS 1109 clarify that for the purpose of assessing whether a prepayment feature meets the SPPI condition, the party exercising the option may pay or receive reasonable compensation for the prepayment irrespective of the reason for prepayment. In other words, prepayment features with negative compensation do not automatically fail SPPI. The amendment applies to annual periods beginning on or after January 1, 2019, with earlier application permitted.

- K-IFRS 1028 – Long-Term Interests in Associates and Joint Ventures (Amendment)

The amendment clarifies that K-IFRS 1109, including its impairment requirements, applies to long-term interests. Furthermore, in applying K-IFRS 1109 to long-term interests, an entity does not take into account adjustments to their carrying amount required by K-IFRS 1028 (i.e., adjustments to the carrying amount of long-term interests arising from the allocation of losses of the investee or assessment of impairment in accordance with K-IFRS 1028). The amendments apply retrospectively to annual reporting periods beginning on or after January 1, 2019. Earlier application is permitted.

- Annual Improvements to K-IFRSs 2015–2017 Cycle

The annual improvements include amendments to four standards, such as K-IFRS 1012, Income Taxes; K-IFRS 1023, Borrowing Costs; K-IFRS 1103, Business Combinations; and K-IFRS 1111, Joint Arrangements.

1. K-IFRS 1012 – Income Taxes
The amendments clarify that an entity should recognize the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognized the transactions that generated the distributable profits. This is the case irrespective of whether different tax rates apply to distributed and undistributed profits.

2. K-IFRS 1023 – Borrowing Costs
The amendments clarify that if any specific borrowing remains outstanding after the related asset is ready for its intended use or sale, that borrowing becomes part of the funds that an entity borrows generally when calculating the capitalization rate on general borrowings.

3. K-IFRS 1103 – Business Combinations
The amendments to K-IFRS 1103 clarify that when an entity obtains control of a business that is a joint operation, the entity applies the requirements for a business combination achieved in stages, including remeasuring its previously held interest ("PHI") in the joint operation at fair value. The PHI to be remeasured includes any unrecognized assets, liabilities and goodwill relating to the joint operation.

4. K-IFRS 1111 – Joint Arrangements
The amendments to K-IFRS 1111 clarify that when a party that participates in, but does not have joint control of, a joint operation that is a business obtains joint control of such a joint operation, the entity does not remeasure its PHI in the joint operation.

All the amendments are effective for annual periods beginning on or after January 1, 2019, and generally require prospective application. Earlier application is permitted.

- K-IFRS 1019 – Employee Benefits Plan Amendment, Curtailment or Settlement (Amendment)

The amendments clarify that the past service cost (or the gain or loss on settlement) is calculated by measuring the defined benefit liability (asset) using updated assumptions and comparing benefits offered and plan assets before and after the plan amendment (or curtailment or settlement). but ignoring the effect of the asset ceiling (that may arise when the defined benefit plan is in a surplus position). K-IFRS 1019 is now clear that the change in the effect of the asset ceiling that may result from the plan amendment (or curtailment or settlement) is determined in a second step and is recognized in the normal manner in other comprehensive income.

The paragraphs that relate to measuring the current service cost and the net interest on the net defined benefit liability (asset) have also been amended. An entity will now be required to use the updated assumptions from this remeasurement to determine current service cost and net interest for the remainder of the reporting period after the change to the plan. In the case of the net interest, the amendments make it clear that for the period post plan amendment, the net interest is calculated by multiplying the net defined benefit liability (asset) as remeasured under paragraph 99 with the discount rate used in the remeasurement (also taking into account the effect of contributions and benefit payments on the net defined benefit liability (asset)).

The amendments are applied prospectively. They apply only to plan amendments, curtailments or settlements that occur on or after the beginning of the annual period in which the amendments to K-IFRS 1019 are first applied. The amendments to K-IFRS 1019 must be applied to annual periods beginning on or after January 1, 2019, but they can be applied earlier if an entity elects to do so.

- K-IFRS 1115 – Revenue from Contracts with Customers (Amendment)

This amendment relates to prevent the revision of meaning 'contract' referred in K-IFRS 1115 paragraph 129.1 to 'individual contract' in relation to 'additional disclosure of contracts based on contract costs incurred to date,' so that even if application of K-IFRS 1115 is adopted, the range of disclosure has not been reduced. In addition, K-IFRS 1115 does not distinguish the types of contracts that the service contracts that did not qualify for the application of K-IFRS 1011 in paragraph 45.1 can be qualified in K-IFRS 1115 paragraph 129.1 and it is to clarify that the range of the contracts subject to make disclosure in accordance with paragraph 129.1 can be expanded compared to the previous standard. This amendment is effective for annual periods beginning on or after January 1, 2019, and earlier application is permitted.

- K-IFRS 2123 – Interpretation Uncertainty over Income Tax Treatments (Amendment)

K-IFRS 2123 interpretation sets out how to determine the accounting tax position when there is uncertainty over income tax treatments. The interpretation requires an entity to:

- determine whether uncertain tax positions are assessed separately or as a group; and
- assess whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by an entity in its income tax filings:
    - If yes, the entity should determine its accounting tax position consistently with the tax treatment used or planned to be used in its income tax filings.
    - If no, the entity should reflect the effect of uncertainty in determining its accounting tax position.

The interpretation is effective for annual periods beginning on or after January 1, 2019. Entities can apply the interpretation with either full retrospective application or modified retrospective application without restatement of comparatives retrospectively or prospectively.

The directors of the Company do not anticipate that the application of the amendments in the future will have an impact on the Group’s consolidated financial statements.

(2) Basis of preparing financial statements

1) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis, except for certain non-current assets and financial instruments that are measured at revalued amounts or fair values, as explained in the accounting policies below. Historical cost is generally based on the fair value of the consideration given in exchange for assets.

2) Functional and reporting currencies

The consolidated financial statements of the Group are presented in the currency of the primary economic environment in which the Group's entities operate (its functional currency). The Group's functional currency and the reporting currency for the consolidated financial statements is Korean won.

3) Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities (including structured entities) controlled by the Group. Control is achieved where the Group 1) has the power over the investee; 2) is exposed, or has rights, to variable returns from its involvement with the investee; and 3) has the ability to use its power to affect its returns. The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

When the Group has less than a majority of the voting rights of an investee, it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in an investee are sufficient to give it power, including:

- the size of the Company's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- potential voting rights held by the Company, other vote holders or other parties;
- rights arising from other contractual arrangements; and
- any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings.

When necessary, adjustments are made to the consolidated financial statements of subsidiaries to bring their accounting policies in line with those used by the Company.

All intragroup transactions, balances, income and expenses are eliminated in full on consolidation.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owners of the Group.

When the Group loses control of a subsidiary, the profit or loss on disposal is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill) and liabilities of the subsidiary and any non-controlling interests. When assets of the subsidiary are carried at revalued amounts or fair values and the related cumulative gain or loss has been recognized in other comprehensive income and accumulated in equity, the amounts previously recognized in other comprehensive income and accumulated in equity are accounted for as if the Group had directly disposed of the relevant assets (i.e., reclassified to profit or loss or transferred directly to retained earnings). The fair value of any investment retained in the former subsidiary at the date when control is lost is recognized as the fair value on initial recognition for subsequent accounting under K-IFRS 1039, *Financial Instruments: Recognition and Measurement*, or, when applicable, the cost on initial recognition of an investment in an associate or a jointly controlled entity.

4) The Group’s investments in subsidiaries as of December 31, 2018, are as follows (Unit: Korean won in millions):

Subsidiary	Location	Closing date	Percentage of ownership and voting right held by the Group Dec. 31, 2018	Dec. 31, 2017	As of and for the year ended December 31, 2018 Assets	Liabilities	Sales	Net income
S&I Coporation(Serveone Co., Ltd.) (*1)	South Korea	12/31	100.00%	100.00%	₩ 2,799,147	₩ 1,772,317	₩ 5,297,333	₩ 126,707
Serveone (Nanjing). Co., Ltd.	China	12/31	100.00%	100.00%	331,051	244,719	664,468	16,110
Serveone Construction Co., Ltd.	China	12/31	100.00%	100.00%	214,691	182,926	413,206	11,807
Konjiam Yewon Co., Ltd.	South Korea	12/31	90.00%	90.00%	8,937	1,091	1,325	(161)
SERVEONE (Guangzhou) Co., Ltd.	China	12/31	100.00%	100.00%	172,382	142,331	298,066	6,102
SERVEONE VIETNAM Co., Ltd.	Vietnam	12/31	100.00%	100.00%	90,878	54,106	243,823	19,170
SERVEONE POLAND Sp.z.o.o.	Poland	12/31	100.00%	100.00%	59,696	52,854	176,136	4,395
Mirae M	South Korea	12/31	100.00%	100.00%	13,023	1,614	4,880	(8,327)
Dream nuri	South Korea	12/31	100.00%	100.00%	705	84	719	130
Serveone Co., Ltd. (*2)	South Korea	12/31	100.00%	-	1,214,068	849,045	278,460	2,959
S&I VIETNAM CONSTRUCTION CO., LTD. (*3)	Vietnam	12/31	100.00%	-	8,052	8,430	-	(1,462)
LG CNS Co., Ltd.	South Korea	12/31	84.95%	84.95%	2,296,268	1,232,568	2,828,574	104,565
LG N-Sys Inc. (*4)	South Korea	12/31	-	100.00%	-	-	-	-
BizTechPartners Co., Ltd. (formerly BNE Partners, Co., Ltd.) (*5)	South Korea	12/31	95.35%	95.35%	27,982	12,457	96,567	2,091
LG CNS Philippines, Inc.	Philippines	12/31	100.00%	100.00%	-	3,169	-	-
LG CNS Europe B.V.	Netherlands	12/31	100.00%	100.00%	18,794	14,100	27,457	956
LG CNS America Inc.	USA	12/31	100.00%	100.00%	43,015	36,328	84,730	(10,466)
PT LG CNS Indonesia	Indonesia	12/31	100.00%	100.00%	3,686	5,970	9,839	(155)
Entrue Brasil Services de T.I. Ltda.	Brazil	12/31	100.00%	100.00%	1,647	436	3,988	486
LG CNS UCESS Philippines, Inc.	Philippines	12/31	100.00%	100.00%	83	-	-	-
LG CNS China, Inc.	China	12/31	100.00%	100.00%	95,477	64,388	136,181	12,783
LG CNS India Pvt., Ltd.	India	12/31	100.00%	100.00%	10,091	8,903	11,739	550
LG CNS Colombia SAS	Colombia	12/31	100.00%	100.00%	20,726	21,850	13,174	(5,853)
SBI-LG Systems Co., Ltd. (*6)	Japan	12/31	-	51.00%	-	-	-	-
Korea Elecom Co., Ltd.	South Korea	12/31	93.93%	93.93%	8,692	9,457	1,268	1,705
LG CNS Malaysia Sdn Bhd	Malaysia	12/31	100.00%	100.00%	4,764	6,839	6,062	(1,299)
LG CNS Saudi Arabia LLC	Saudi Arabia	12/31	51.00%	51.00%	55	15	-	-
LG CNS JAPAN, Co., Ltd.	Japan	12/31	100.00%	100.00%	23,663	12,855	37,536	1,237
Collain Healthcare, LLC (*7)	USA	12/31	-	70.00%	-	-	-	-
LG CNS Uzbekistan, LLC	Uzbekistan	12/31	51.00%	51.00%	292	664	1,144	(136)
Haengbokmaru Co., Ltd.	South Korea	12/31	100.00%	100.00%	1,363	204	2,635	425
LG CNS VIETNAM CO., LTD.	Vietnam	12/31	100.00%	100.00%	11,345	10,113	21,221	623
LG CNS FUND I LLC (*3)	USA	12/31	100.00%	-	-	-	-	(275)
Sejong Green Power (*8)	South Korea	12/31	19.91%	19.91%	36,567	40,863	1,406	(380)
LG Sports Ltd.	South Korea	12/31	100.00%	100.00%	124,312	38,559	60,495	632
LG Management Development Institute	South Korea	12/31	100.00%	100.00%	93,043	56,234	86,851	4,303
Lusem Co., Ltd. (*9)	South Korea	12/31	-	67.96%	-	-	-	-
LG Holdings Japan Co., Ltd.	Japan	12/31	100.00%	100.00%	254,890	49,609	7,943	2,901
LG Corp. U.S.A.	USA	12/31	100.00%	100.00%	202,923	41,663	-	(525)

(*1) Changed its name during current period.
(*2) Established by dividing it from S&I Corporation (former, Serveone) and named Serveone Co., Ltd.
(*3) Established during current period.
(*4) Merged with the LG CNS Co., Ltd. during the current period.
(*5) Acquired additionally during the current period.
(*6) Disposed during current period (see Note 36).
(*7) Disposed during current period.
(*8) Incorporated as a subsidiary in its investment in the associate due to its obligation to purchase shares under the arrangement during current period (see Note 30).
(*9) Disposed during current period (see Note 36).

5) As of December 31, 2018, the consolidated financial position and the share of non-controlling interests of major subsidiaries that have non-controlling interests are as follows (Unit: Korean won in millions):

	LG CNS Co., Ltd.	
Current assets	₩	1,585,859
Non-current assets		889,462
Total assets		2,475,321
Current liabilities		815,042
Non-current liabilities		563,906
Total liabilities		1,378,948
Equity attributable to owners of the Company		1,099,326
Equity attributable to non-controlling interests		(2,953)
Total equity	₩	1,096,373

6) For the year ended December 31, 2018, the consolidated financial performances of major subsidiaries that have non-controlling interests are as follows (Unit: Korean won in millions):

	LG CNS Co., Ltd.	
Revenue	₩	3,117,656
Operating income (loss)		187,059
Profit (loss) for the year		110,508
Other comprehensive income (loss)		(10,673)
Total comprehensive income for the year	₩	99,835

7) For the year ended December 31, 2018, the consolidated cash flows of major subsidiaries that have non-controlling interests are as follows (Unit: Korean won in millions):

	LG CNS Co., Ltd.	
Cash flows from operating activities	₩	158,890
Cash flows from investing activities		(67,744)
Cash flows from financing activities		(5,645)
Net change in cash and cash equivalents		85,501
Cash and cash equivalents at the beginning of year		352,557
Effects of exchange rate changes on the balance of cash held in foreign currencies		1,288
Cash and cash equivalents at the end of year	₩	439,346

8) The ownership interest held by non-controlling interests and details of financial position, results of operation and dividends vested in non-controlling interests by each of the major subsidiaries are as follows (in millions of Korean won):

		LG CNS Co., Ltd.
Ownership interest held by non-controlling interests		15.05%
Cumulative non-controlling interests	₩	162,469
Net income (loss) vested in non-controlling interests		18,834
Comprehensive income vested in non-controlling interests		17,133
Dividends paid to non-controlling interests	₩	2,755

(3) Business combinations

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. Acquisition-related costs are generally recognized in profit or loss as incurred.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognized at their fair value at the acquisition date, except that:

- deferred tax assets or liabilities and liabilities or assets related to employee benefit arrangements are recognized and measured in accordance with K-IFRS 1012 and K-IFRS 1019, respectively;
- liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered in to replace share-based payment arrangements of the acquiree are measured in accordance with K-IFRS 1102, Share-Based Payment, at the acquisition date; and
- assets (or disposal groups) that are classified as held for sale in accordance with K-IFRS 1105, Non-Current Assets Held for Sale and Discontinued Operations, are measured in accordance with that standard.

Goodwill is measured as the excess of the sum of a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree and c) the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after reassessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of a) the consideration transferred, b) the amount of any non-controlling interests in the acquiree and c) the fair value of the acquirer's PHI in the acquiree (if any), the excess is recognized immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured either at fair value or at the non-controlling interests' proportionate share of the recognized amounts of the acquiree's identifiable net assets. The choice of measurement basis is made on a transaction-by-transaction basis. Other types of non-controlling interests are measured at fair value or, when applicable, on the basis specified in another K-IFRS.

When the consideration transferred by the Group in a business combination includes assets or liabilities resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination. Changes in the fair value of the contingent consideration that qualify as measurement-period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement-period adjustments are adjustments that arise from additional information obtained during the ‘measurement period’ (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

The subsequent accounting for changes in the fair value of the contingent consideration that do not qualify as measurement-period adjustments depends on how the contingent consideration is classified. Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration that is classified as an asset or a liability is remeasured at subsequent reporting dates in accordance with K-IFRS 1039 or K-IFRS 1037, *Provisions, Contingent Liabilities and Contingent Assets*, as appropriate, with the corresponding gain or loss being recognized in profit or loss.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date (i.e., the date when the Group obtains control) and the resulting gain or loss, if any, is recognized in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date, that have previously been recognized in other comprehensive income, are reclassified to profit or loss where such treatment would be appropriate if that interest was disposed of.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

(4) Foreign currency translation

The individual financial statements of each group entity are presented in the currency of the primary economic environment in which the entity operates (its functional currency). For the purpose of the consolidated financial statements, the results of operations and financial position of each group entity are expressed in Korean won, which is the functional currency of the entity and the presentation currency for the consolidated financial statements.

In preparing the financial statements of the individual entities, transactions in currencies other than the entity’s functional currency (“foreign currencies”) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are recognized in profit or loss in the period in which they arise, except for:

- exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;
- exchange differences on transactions entered into in order to hedge certain foreign currency risks; and
- exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore, forming part of the net investment in the foreign operation), which are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal or partial disposal of the net investment.

For the purpose of presenting the consolidated financial statements, the assets and liabilities of the Group’s foreign operations are expressed in Korean won using exchange rates prevailing at the end of the reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuated significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in equity (attributed to non-controlling interests, as appropriate). On the disposal of a foreign operation (i.e., a disposal of the Group’s entire interest in a foreign operation, a disposal involving loss of control over a subsidiary that includes a foreign operation or partial disposal of an interest in a joint arrangement or an associate that includes a foreign operation of which the retained interest becomes a financial asset), all of the accumulated exchange differences in respect of that operation attributable to the owners of the Group are reclassified to profit or loss. Any exchange differences that have previously been attributed to non-controlling interests are derecognized, but they are not reclassified to profit or loss.

In the case of a partial disposal (i.e., no loss of control) of a subsidiary that includes a foreign operation, the proportionate share of accumulated exchange differences are reattributed to non-controlling interests in equity and are not recognized in profit or loss. For all other partial disposals (i.e., partial disposals of associates or joint arrangements that do not result in the Group losing significant influence or joint control), the proportionate share of the accumulated exchange differences is reclassified to profit or loss.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate. Exchange differences arising are recognized in other comprehensive income.

(5) Cash and cash equivalents

Cash and cash equivalents include cash, savings and checking accounts and highly liquid short-term investments (maturities of three months or less from the date of acquisition). Bank overdraft is accounted for as short-term borrowings.

(6) Financial instruments

Financial assets and financial liabilities are recognized in the Group's statements of financial position when it becomes a party to the contractual provisions of the instrument.
Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognized immediately in profit or loss.

(7) Financial assets

All regular-way purchases or sales of financial assets are recognized and derecognized on a trade-date basis. Regular-way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

All recognized financial assets are measured subsequently in their entirety at either amortized cost or fair value, depending on the classification of the financial assets.

1) Classification of financial assets

Debt instruments that meet the following conditions are measured subsequently at amortized cost:
The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows.
The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Debt instruments that meet the following conditions are measured subsequently at FVTOCI:
The financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling the financial assets.
The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.
By default, all other financial assets are measured subsequently at FVTPL.
Despite the foregoing, the Group may make the following irrevocable election / designation at initial recognition of a financial asset:
The Group may irrevocably elect to present subsequent changes in fair value of an equity investment in other comprehensive income if certain criteria are met (see 1-3) below).
The Group may irrevocably designate a debt investment that meets the amortized cost or FVTOCI criteria as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch (see 1-4) below).

1-1) Amortized cost and effective interest method

The effective interest method is a method of calculating the amortized cost of a debt instrument and allocating interest income over the relevant period. For financial assets other than purchased or originated credit-impaired financial assets (i.e., assets that are credit impaired on initial recognition), the effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts), excluding ECLs, through the expected life of the debt instrument, or, where appropriate, a shorter period, to the gross carrying amount of the debt instrument on initial recognition. For purchased or originated credit-impaired financial assets, a credit-adjusted effective interest rate is calculated by discounting the estimated future cash flows, including ECLs, to the amortized cost of the debt instrument on initial recognition.

The amortized cost of a financial asset is the amount at which the financial asset is measured at initial recognition minus the principal repayments, plus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss allowance. The gross carrying amount of a financial asset is the amortized cost of a financial asset before adjusting for any loss allowance.

Interest income is recognized using the effective interest method for debt instruments measured subsequently at amortized cost and at FVTOCI. For financial assets other than purchased or originated credit-impaired financial assets, interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit impaired (see below). For financial assets that have subsequently become credit impaired, interest income is recognized by applying the effective interest rate to the amortized cost of the financial asset. If, in subsequent reporting periods, the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit impaired, interest income is recognized by applying the effective interest rate to the gross carrying amount of the financial asset.

For purchased or originated credit-impaired financial assets, the Group recognizes interest income by applying the credit-adjusted effective interest rate to the amortized cost of the financial asset from initial recognition. The calculation does not revert to the gross basis even if the credit risk of the financial asset subsequently improves so that the financial asset is no longer credit impaired.

Interest income is recognized in profit or loss and is included in the "finance income - interest income" line item (see Note 25).

1-2) Debt instruments classified as at FVTOCI

The corporate bonds held by the Group are classified as at FVTOCI. Fair value is determined in the manner described in Note 49. The corporate bonds are initially measured at fair value, plus transaction costs. Subsequently, changes in the carrying amount of these corporate bonds as a result of foreign exchange gains and losses, impairment gains or losses and interest income calculated using the effective interest method are recognized in profit or loss. The amounts that are recognized in profit or loss are the same as the amounts that would have been recognized in profit or loss if these corporate bonds had been measured at amortized cost. All other changes in the carrying amount of these corporate bonds are recognized in other comprehensive income and accumulated under the heading of investments revaluation reserve. When these corporate bonds are derecognized, the cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss.

1-3) Equity instruments designated as at FVTOCI

On initial recognition, the Group may make an irrevocable election (on an instrument-by-instrument basis) to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

A financial asset is held for trading if:
it has been acquired principally for the purpose of selling in the near term;
on initial recognition, it is part of a portfolio of identified financial instruments that the Group manages together and has evidence of a recent actual pattern of short-term profit taking; or
it is a derivative (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument).

Investments in equity instruments at FVTOCI are initially measured at fair value, plus transaction costs. Subsequently, they are measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in the investments revaluation reserve. The cumulative gain or loss is not be reclassified to profit or loss on disposal of the equity investments; instead, it is transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss in accordance with K-IFRS 1109, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the 'finance income' line item (see Note 25) in profit or loss.

1-4) Financial assets at FVTPL

Financial assets that do not meet the criteria for being measured at amortized cost or FVTOCI are measured at FVTPL. Specifically:
Investments in equity instruments are classified as at FVTPL, unless the Group designates an equity investment that is neither held for trading nor a contingent consideration arising from a business combination as at FVTOCI on initial recognition (see 1-3) above).
Debt instruments that do not meet the amortized cost criteria or the FVTOCI criteria (see 1-1) and 1-2) above) are classified as at FVTPL. In addition, debt instruments that meet either the amortized cost criteria or the FVTOCI criteria may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency (so called 'accounting mismatch') that would arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases. The Group has not designated any debt instruments as at FVTPL.
Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss to the extent they are not part of a designated hedging relationship (see hedge accounting policy). The net gain or loss recognized in profit or loss includes any dividend or interest earned on the financial asset and is included in the 'other gains and losses' line item (see Notes 25 and 26). Fair value is determined in the manner described in Note 34.

2) Foreign exchange gains and losses

The carrying amount of financial assets that are denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of each reporting period. Specifically:
For financial assets measured at amortized cost that are not part of a designated hedging relationship, exchange differences are recognized in profit or loss in the 'other gains and losses' line item (see Note 26).
For debt instruments measured at FVTOCI that are not part of a designated hedging relationship, exchange differences on the amortized cost of the debt instrument are recognized in profit or loss in the 'other gains and losses' line item (see Note 26). Other exchange differences are recognized in other comprehensive income in the investments revaluation reserve.
For financial assets measured at FVTPL that are not part of a designated hedging relationship, exchange differences are recognized in profit or loss in the 'other gains and losses' line item (see Note 26).
For equity instruments measured at FVTOCI, exchange differences are recognized in other comprehensive income in the investments revaluation reserve.

3) Impairment of financial assets

The Group recognizes a loss allowance for ECLs on investments in debt instruments that are measured at amortized cost or at FVTOCI, lease receivables, trade receivables and contract assets, as well as on financial guarantee contracts. The amount of ECLs is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

The Group always recognizes lifetime ECL for trade receivables, contract assets and lease receivables. The ECLs on these financial assets are estimated using a provision matrix based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate.

For all other financial instruments, the Group recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECL.

Lifetime ECL represents the ECLs that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

3-1) Significant increase in credit risk

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument at the reporting date with the risk of a default occurring on the financial instrument at the date of initial recognition. In making this assessment, 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. Forward-looking information considered includes the future prospects of the industries in which the Group's debtors operate, obtained from economic expert reports, financial analysts, governmental bodies, relevant think-tanks and other similar organizations, as well as consideration of various external sources of actual and forecast economic information that relate to the Group's core operations.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:
An actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating.
Significant deterioration in external market indicators of credit risk for a particular financial instrument, e.g., a significant increase in the credit spread, the credit default swap prices for the debtor, or the length of time or the extent to which the fair value of a financial asset has been less than its amortized cost.
An actual or expected significant deterioration in the operating results of the debtor.
Significant increases in credit risk on other financial instruments of the same debtor.
An actual or expected significant adverse change in the regulatory, economic or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.
Irrespective of the outcome of the above assessment, the Group presumes that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

Despite the foregoing, the Group assumes that the credit risk on a financial instrument has not increased significantly since initial recognition if the financial instrument is determined to have low credit risk at the reporting date. A financial instrument is determined to have low credit risk if:
the financial instrument has a low risk of default;
the debtor has a strong capacity to meet its contractual cash flow obligations in the near term; and
adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations.

The Group considers a financial asset to have low credit risk when the asset has external credit rating of 'investment grade' in accordance with the globally understood definition or if an external rating is not available, the asset has an internal rating of 'performing.' Performing means that the counterparty has a strong financial position and there are no past due amounts.

For financial guarantee contracts, the date that the Group becomes a party to the irrevocable commitment is considered to be the date of initial recognition for the purposes of assessing the financial instrument for impairment. In assessing whether there has been a significant increase in the credit risk since initial recognition of a financial guarantee contracts, the Group considers the changes in the risk that the specified debtor will default on the contract.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

3-2) Definition of default

The Group considers the following as constituting an event of default for internal credit risk management purposes as historical experience indicates that financial assets that meet either of the following criteria are generally not recoverable:

when there is a breach of financial covenants by the debtor; or
information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collateral held by the Group).

Irrespective of the above analysis, the Group considers that default has occurred when a financial asset is more than 90 days past due, unless the Group has a reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

3-3) Credit-impaired financial assets

A financial asset is credit impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit impaired includes observable data about the following events:

(a) Significant financial difficulty of the issuer or the borrower.
(b) A breach of contract, such as a default or past due event (see 3-2) above).
(c) The lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider.
(d) It is becoming probable that the borrower will enter bankruptcy or other financial reorganization.
(e) The disappearance of an active market for that financial asset because of financial difficulties.

3-4) Write-off policy

The Group writes off a financial asset when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g., when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables, when the amounts are over two years past due, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. Any recoveries made are recognized in profit or loss.

3-5) Measurement and recognition of ECLs

The measurement of ECLs is a function of the probability of default, loss given default (i.e., the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information as described above. As for the exposure at default, for financial assets, this is represented by the assets' gross carrying amount at the reporting date; for financial guarantee contracts, the exposure includes the amount drawn down as at the reporting date, together with any additional amounts expected to be drawn down in the future by default date determined based on historical trend, the Group's understanding of the specific future financing needs of the debtors and other relevant forward-looking information.

For financial assets, the ECL is estimated as the difference between all contractual cash flows that are due to the Group in accordance with the contract and all the cash flows that the Group expects to receive, discounted at the original effective interest rate. For a lease receivable, the cash flows used for determining the ECLs is consistent with the cash flows used in measuring the lease receivable in accordance with K-IFRS 1017, Leases.

For a financial guarantee contract, as the Group is required to make payments only in the event of a default by the debtor in accordance with the terms of the instrument that is guaranteed, the expected loss allowance is the expected payments to reimburse the holder for a credit loss that it incurs, less any amounts that the Group expects to receive from the holder, the debtor or any other party.

If the Group has measured the loss allowance for a financial instrument at an amount equal to lifetime ECL in the previous reporting period, but determines at the current reporting date that the conditions for lifetime ECL are no longer met, the Group measures the loss allowance at an amount equal to 12-month ECL at the current reporting date, except for assets for which simplified approach was used.

The Group recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account, except for investments in debt instruments that are measured at FVTOCI, for which the loss allowance is recognized in other comprehensive income and accumulated in the investment revaluation reserve, and does not reduce the carrying amount of the financial asset in the consolidated statements of financial position.

4) Derecognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On derecognition of a financial asset measured at amortized cost, the difference between the asset’s carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. In addition, on derecognition of an investment in a debt instrument classified as at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is reclassified to profit or loss. In contrast, on derecognition of an investment in equity instrument which the Group has elected on initial recognition to measure at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is not reclassified to profit or loss, but is transferred to retained earnings.

(8) Inventories

Inventories are stated at the lower of cost or net realizable value. Cost of inventories, except for those in transit, is measured under the weighted-average method and consists of the purchase price, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realizable value represents the estimated selling price for inventories, less all estimated costs of completion and costs necessary to make the sale.

The carrying amount of inventories sold in the period and the amount of any write-down of inventories to net realizable value and all losses of inventories in the period, less the amount of any reversal in the period of any write-down of the inventories, arising from an increase in net realizable value, is recognized as expense during that period.

(9) Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but does not control or has joint control over those policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results of operations and assets and liabilities of associates or joint ventures are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with K-IFRS 1105, *Non-Current Assets Held for Sale and Discontinued Operations*. Under the equity method, an investment in an associate or a joint venture is initially recognized in the consolidated statements of financial position at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associate or joint venture. When the Group's share of losses in an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate or a joint venture recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

Upon disposal of an associate or a joint venture that results in the Group losing significant influence over that associate or joint venture, any retained investment is measured at fair value at that date and the fair value is regarded as its fair value on initial recognition as a financial asset in accordance with K-IFRS 1039. The difference between the previous carrying amount of the associate or joint venture attributable to the retained interest and its fair value is included in the determination of the gain or loss on disposal of the associate or joint venture. In addition, the Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate or joint venture on the same basis we would be required if that associate or joint venture had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognized in other comprehensive income by that associate or joint venture would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as reclassification adjustment) when it loses significant influence over that associate or joint venture.

When the Group reduces its ownership interest in an associate or a joint venture, but continues to use the equity method, the Group reclassifies to profit or loss the proportion of the gain or loss that had previously been recognized in other comprehensive income relating to that reduction in ownership interest if that gain or loss would be reclassified to profit or loss on the disposal of the related assets or liabilities. In addition, the Group applies K-IFRS 1105 to a portion of investment in an associate or a joint venture that meets the criteria to be classified as held for sale.

The requirements of K-IFRS 1039, *Financial Instruments: Recognition and Measurement,* are applied to determine whether it is necessary to recognize any impairment loss with respect to the Group's investment in an associate or a joint venture. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with K-IFRS 1036, *Impairment of Assets*, by comparing its recoverable amount (higher of value in use or fair value, less costs to sell) with its carrying amount; any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized in accordance with K-IFRS 1036 to the extent that the recoverable amount of the investment subsequently increases.

The Group continues to use the equity method when an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate. There is no remeasurement to fair value upon such changes in ownership interests.

When a group entity transacts with an associate or a joint venture of the Group, profits and losses resulting from the transactions with the associate or joint venture are recognized in the Group's consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

(10) Interests in joint operations

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement that exists only when decisions about the relevant activities require unanimous consent of the parties’ sharing control.

When a group entity undertakes its activities under joint operations, the Group as a joint operator recognizes in relation to its interest in a joint operation:

- its assets, including its share of any assets held jointly;
- its liabilities, including its share of any liabilities incurred jointly;
- its revenue from the sale of its share of the output arising from the joint operation;
- its share of the revenue from the sale of the output by the joint operation; and
- its expenses, including its share of any expenses incurred jointly.

The Group accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the K-IFRSs applicable to the particular assets, liabilities, revenues and expenses.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a sale or contribution of assets), the Group is considered to be conducting the transaction with the other parties to the joint operation, and gains and losses resulting from the transactions are recognized in the Group's consolidated financial statements only to the extent of other parties' interests in the joint operation.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a purchase of assets), the Group does not recognize its share of the gains and losses until it resells those assets to a third party.

(11) Goodwill

Goodwill arising on an acquisition of a business is carried at cost as established at the date of acquisition of the business, less accumulated impairment losses, if any (see Note 2.(3)).

A cash-generating unit to which goodwill has been allocated is tested for impairment annually or, more frequently, when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit on a pro rata basis based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss in the consolidated statements of comprehensive income. An impairment loss recognized for goodwill is not reversed in subsequent periods.

On disposal of the relevant cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

(12) Property, plant and equipment

Property, plant and equipment are stated at cost, less subsequent accumulated depreciation and accumulated impairment losses. The cost of an item of property, plant and equipment is directly attributable to their purchase or construction, which includes any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are recognized at the carrying amount of an asset or as an asset if it is probable that future economic benefits associated with the assets will flow to the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

The Group does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful lives of the assets as follows:

	Estimated useful lives (years)
Buildings	10–50
Structures	5–40
Machinery	4–15
Other property	2–25

If each part of an item of property, plant and equipment has a cost that is significant in relation to the total cost of the item, it is depreciated separately.

The Group reviews the depreciation method; the estimated useful lives; and residual values of property, plant and equipment at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in an accounting estimate.

(13) Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation (including property under construction for such purposes). Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are measured at fair value. Gains and losses arising from changes in the fair value of investment properties are included in profit or loss in the period in which they arise.

An investment property is derecognized upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from the disposal. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized.

While land is not depreciated, all other investment properties are depreciated based on the respective assets' estimated useful lives ranging from 5 to 50 years using the straight-line method.

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

(14) Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at cost, less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are carried at cost, less accumulated impairment losses.

2) Internally generated intangible assets - research and development expenditure

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

An internally generated intangible asset arising from development (or from the development phase of an internal project) is recognized if, and only if, all of the following have been demonstrated:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale.
- The intention to complete the intangible asset and use or sell it.
- The ability to use or sell the intangible asset;
- How the intangible asset will generate probable future economic benefits.
- The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset.
- The ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for internally generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. Where no internally generated intangible asset can be recognized, development expenditure is recognized in profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally generated intangible assets are reported at cost, less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

3) Intangible assets acquired in a business combination

Intangible assets that are acquired in a business combination are recognized separately from goodwill and are initially recognized at their fair value at the acquisition date (which is regarded as their cost).

Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost, less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

4) Derecognition of intangible assets

An intangible asset is derecognized on disposal, or when no future economic benefits are expected from its use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in profit or loss when the asset is derecognized.

(15) Impairment of tangible and intangible assets other than goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise, they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value, less costs to sell, or value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pretax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

(16) Financial liabilities and equity instruments

1) Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement and the definitions of financial liability and an equity instrument.

2) Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Group are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Company’s own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company’s own equity instruments.

3) Financial liabilities

All financial liabilities are measured subsequently at amortized cost using the effective interest method or at FVTPL. However, financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies, and financial guarantee contracts issued by the Group, are measured in accordance with the specific accounting policies set out below.

4) Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- it has been acquired principally for the purpose of repurchasing in the near term;
- on initial recognition, it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit taking; or
- it is a derivative that is not designated and effective as a hedging instrument..

A financial liability other than a financial liability held for trading or contingent consideration of an acquirer in a business combination may be designated as at FVTPL upon initial recognition if:

- such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise;
- the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- it forms part of a contract containing one or more embedded derivatives, and K-IFRS 1109 permits the entire combined contract to be designated as at FVTPL.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognized in profit or loss to the extent that they are not part of a designated hedging relationship (see hedge accounting policy). The net gain or loss recognized in profit or loss incorporates any interest paid on the financial liability and is included in the ‘other gains and losses’ line item (see Note 26) in profit or loss.

However, for financial liabilities that are designated as at FVTPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability is recognized in other comprehensive income, unless the recognition of the effects of changes in the liability’s credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. The remaining amount of change in the fair value of liability is recognized in profit or loss. Changes in fair value attributable to a financial liability’s credit risk that is recognized in other comprehensive income are not subsequently reclassified to profit or loss; instead, they are transferred to retained earnings upon derecognition of the financial liability.

Gains or losses on financial guarantee contracts issued by the Group that are designated by the Group as at FVTPL are recognized in profit or loss.

Fair value is determined in the manner described in Note 34.

5) Financial liabilities measured subsequently at amortized cost

Financial liabilities that are not (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) designated as at FVTPL are measured subsequently at amortized cost using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a financial liability and allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial liability, or, where appropriate, a shorter period, to the amortized cost of a financial liability.

6) Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due in accordance with the terms of debt instruments.

Financial guarantee contract liabilities are measured initially at their fair values and, if not designated as at FVTPL and do not arise from a transfer of an asset, are measured subsequently at the higher of:

- the amount of the loss allowance determined in accordance with K-IFRS 1109 (see financial assets above); and
- the amount recognized initially less, where appropriate, cumulative amortization recognized in accordance with the revenue recognition policies set out above.

7) Foreign exchange gains and losses

For financial liabilities that are denominated in a foreign currency and are measured at amortized cost at the end of each reporting period, the foreign exchange gains and losses are determined based on the amortized cost of the instruments. These foreign exchange gains and losses are recognized in the ‘other gains and losses’ line item in profit or loss (see Note 26) for financial liabilities that are not part of a designated hedging relationship. For those which are designated as a hedging instrument for a hedge of foreign currency risk, foreign exchange gains and losses are recognized in other comprehensive income and accumulated in a separate component of equity.

The fair value of financial liabilities denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of the reporting period. For financial liabilities that are measured as at FVTPL, the foreign exchange component forms part of the fair value gains or losses and is recognized in profit or loss for financial liabilities that are not part of a designated hedging relationship.

8) Derecognition of financial liabilities

The Group derecognizes financial liabilities when, and only when, the Group’s obligations are discharged, cancelled or expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

When the Group exchanges with the existing lender one debt instrument into another one with the substantially different terms, such exchange is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Similarly, the Group accounts for substantial modification of terms of an existing liability or part of it as an extinguishment of the original financial liability and the recognition of a new liability. It is assumed that the terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid, net of any fees received and discounted using the original effective rate, is at least 10% different from the discounted present value of the remaining cash flows of the original financial liability. If the modification is not substantial, the difference between (1) the carrying amount of the liability before the modification and (2) the present value of the cash flows after modification should be recognized in profit or loss as the modification gain or loss within other gains and losses.

(17) Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

1) The Group as lessor

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Group's net investment in the leases. Finance lease income is allocated to accounting periods, so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized on a straight-line basis over the lease term.

2) The Group as lessee

Assets held under finance leases are initially recognized as assets of the Group at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the consolidated statements of financial position as a finance lease obligation.

Lease payments are apportioned between finance expenses and reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Finance expenses are recognized immediately in profit or loss, unless they are directly attributable to qualifying assets, in which case they are capitalized in accordance with the Group's general policy on borrowing costs (see 2.(18)). Contingent rentals are recognized as expenses in the periods in which they are incurred.

Operating lease payments are recognized as an expense on a straight-line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed. Contingent rentals arising under operating leases are recognized as an expense in the period in which they are incurred.

In the event that lease incentives are received to enter into operating leases, such incentives are recognized as a liability.

The aggregate benefit of incentives is recognized as a reduction of rental expense on a straight-line basis, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

(18) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization.

All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

(19) Derivative financial instruments

The Group enters into a variety of derivative financial instruments to manage its exposure to interest rate and foreign exchange rate risk, including foreign exchange forward contracts, interest rate swaps and cross-currency swaps.

Derivatives are initially recognized at fair value at the date the derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately, unless the derivative is designated and effective as a hedging instrument, in which case the timing of the recognition in profit or loss depends on the nature of the hedge relationship. The Group designates certain derivatives as either hedges of recognized assets or liabilities or firm commitments (fair value hedges), hedges of highly probable forecast transactions or hedges of foreign currency risk of firm commitments (cash flow hedges) or hedges of net investments in foreign operations (net investment hedges).

A derivative with a positive fair value is recognized as a financial asset; a derivative with a negative fair value is recognized as a financial liability. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not expected to be realized or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

1) Embedded derivatives

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

An embedded derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the hybrid instrument to which the embedded derivative relates is more than 12 months, and it is not expected to be realized or settled within 12 months. Other embedded derivatives are presented as current assets or current liabilities.

2) Hedge accounting

The Group designates certain hedging instruments, which include derivatives, embedded derivatives and non-derivatives with respect to foreign currency risk, as either fair value hedges, cash flow hedges or hedges of net investments in foreign operations. Hedges of foreign exchange risk on firm commitments are accounted for as cash flow hedges.

At the inception of the hedge relationship, the entity 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.

3) Fair value hedges

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognized in profit or loss immediately, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk. The change in the fair value of the hedging instrument and the change in the hedged item attributable to the hedged risk are recognized in the line item of the consolidated statements of comprehensive income related to the hedged item.

Hedge accounting is discontinued when the Group revokes the hedging relationship; when the hedging instrument expires or is sold, terminated or exercised; or when it no longer qualifies for hedge accounting. The fair value adjustment to the carrying amount of the hedged item arising from the hedged risk is amortized to profit or loss from that date.

4) Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss.

Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item is recognized in profit or loss in the same line item of the consolidated statements of comprehensive income as the recognized hedged item. However, when the forecast transaction that is hedged results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously accumulated in equity are transferred from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability.

Hedge accounting is discontinued when the Group revokes the hedging relationship; when the hedging instrument expires or is sold, terminated or exercised; or it no longer qualifies for hedge accounting. Any gain or loss accumulated in equity at that time remains in equity and is recognized when the forecast transaction is ultimately recognized in profit or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

(20) Employee benefits

Contributions to defined contribution retirement benefit plans are recognized as an expense when employees have rendered service entitling them to the contributions.

For defined benefit retirement benefit plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each reporting period. Remeasurement, comprising actuarial gains and losses, the effect of the changes to the asset ceiling (if applicable) and the return on plan assets (excluding interest), is reflected immediately in the consolidated statements of financial position with a charge or credit recognized in other comprehensive income in the period in which they occur. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss. Past service cost is recognized in profit or loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are composed of service cost (including current service cost and past service cost, as well as gains and losses on curtailments and settlements), net interest expense (income) and remeasurement.

The Group presents the service cost and net interest expense (income) components in profit or loss, and the remeasurement component in other comprehensive income. Curtailment gains and losses are accounted for as past service costs.

The retirement benefit obligation recognized in the consolidated statements of financial position represents the actual deficit or surplus in the Group’s defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

(21) Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive); as a result of a past event, it is probable that the Group will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material).
When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

1) Onerous contracts

Present obligations arising under onerous contracts are recognized and measured as provisions. An onerous contract is considered to exist where the Group has a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract.

2) Warranties

Provisions for the expected cost of warranty obligations under local sale of goods legislation are recognized at the date of sale of the relevant products, at the directors' best estimate of the expenditure required to settle the Group's obligation.

(22) Government grants

Government grants are not recognized until there is a reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognized as deferred revenue in the consolidated statements of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognized in profit or loss in the period in which they become receivable.

The benefit of a government loan at a below-market rate of interest is treated as a government grant, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

(23) Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable, net of value-added tax ("VAT"), returns, rebates and discounts. The Group recognizes revenue when it is reliably measurable and the inflows of future economic benefits are likely. For each type of revenue, the Group recognizes it as follows:

1) Sale of goods

The Group recognizes revenue from sale of goods when significant risks and rewards from ownership of goods have been transferred, and retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods. Therefore, the Group recognizes revenue for the manufactured goods at acceptance and merchandises at delivery. Revenue is recognized, net of discounts, and returns derived from previous experience and provision are set for estimated return amounts, and if the past experience reveals that the return amounts or the return policy is immaterial, the gross sales amount will be recognized as revenue.

2) Rendering of service

The Group recognizes revenue from rendering service by the progress standards. The Group estimates the percentage of completion using surveys of work performed, services performed to date as a percentage of total services to be performed and the proportion of costs incurred to date in order to reliably measure the rendered services.

3) Construction contracts

Where the outcome of a construction contract can be estimated reliably, revenues and costs are recognized by reference to the stage of completion of the contract activity at the end of the reporting period, measured based on the proportion of contract costs incurred for work performed to date relative to the estimated total contract costs, except where this would not be representative of the stage of completion. Variations in contract work, claims and incentive payments are included to the extent that the amount can be measured reliably and their receipt is considered probable.

Where the outcome of a construction contract cannot be estimated reliably, contract revenue is recognized to the extent it is probable that contract costs incurred will be recoverable. Contract costs are recognized as expenses in the period in which they are incurred.

When the outcome of a construction contract can be estimated reliably, contract revenue and contract costs associated with the construction contract shall be recognized as revenue and expenses by reference to the stage of completion of the contract activity at the reporting date. When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognized as an expense immediately.

Where contract costs incurred to date, plus recognized profits, less recognized losses exceed progress billings, the surplus is shown as amounts due from customers for contract work. For contracts where progress billings exceed contract costs incurred to date, plus recognized profits, less recognized losses, the surplus is shown as the amount due to customers for contract work. Amounts received before the related work is performed are included in the consolidated statements of financial position, as a liability, as advances received. Amounts billed for work performed, but not yet paid by the customer, are included in the consolidated statements of financial position under trade and other receivables.

4) Dividend income and interest income

Dividend income from investments is recognized when the shareholders’ right to receive payment has been established. Interest income is accrued on a timely basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that of the asset’s net carrying amount on initial recognition.

5) Royalty revenue

Royalty revenue is recognized on an accrual basis in accordance with the substance of the relevant agreement.

6) Rental income

The Group’s policy for recognition of revenue from operating leases is summarized in Note 2. (16).

(24) Current and deferred taxes

Income tax expense represents the sum of the tax currently payable and deferred tax.

1) Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit as reported in the consolidated statements of comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group’s liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent it is probable that there will be sufficient taxable profits against which benefits of the temporary differences can be utilized and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset if, and only if, the Group has a legally enforceable right to set off current tax assets against current tax liabilities, and the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities, which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

3) Current and deferred taxes for the year

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

(25) Treasury stock

When the Group repurchases its equity instruments (treasury stock), the incremental costs that increase in relation to capital transactions, net of tax effect, are deducted from equity and recognized as other capital items deducted from the total equity in the consolidated statements of financial position. In addition, profits or losses from purchase, sale or retirement of treasury stocks are directly recognized in equity and not in current profit or loss.

(26) Assets held for sale

Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continued use. This condition is regarded as met only when the sale is highly probable and the non-current asset (or disposal group) is available for immediate sale in its present condition. Management must commit to a plan to sell the assets and is expected to meet the requirements within one year’s time.

If the Group commits to a plan to sell assets to lose control of a subsidiary, then all the assets and liabilities of that subsidiary are classified as held for sale when the above-mentioned conditions are met, regardless of whether the Group will retain a non-controlling interest in its former subsidiary after the sale.

When the Group is committed to a sale plan involving disposal of an investment, or a portion of an investment, in an associate or joint venture, the investment or the portion of the investment that will be disposed of is classified as held for sale when the criteria described above are met, and the Group discontinues the use of the equity method in relation to the portion that is classified as held for sale. Any retained portion of an investment in an associate or a joint venture that has not been classified as held for sale continues to be accounted for using the equity method. The Group discontinues the use of the equity method at the time of disposal when the disposal results in the Group losing significant influence over the associate or joint venture.

After the disposal takes place, the Group accounts for any retained interest in the associate or joint venture in accordance with K-IFRS 1039, *Financial Instruments: Recognition and Measurement*, unless the retained interest continues to be an associate or a joint venture, in which case the Group uses the equity method

Non-current assets (and disposal groups) classified as held for sale are measured at the lower of their previous carrying amount and fair value, less costs to sell.

(27) Fair value

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of K-IFRS 1102, *Share-Based Payment;* leasing transactions that are within the scope of K-IFRS 1017, *Leases;* and measurements that have some similarities to fair value but are not fair value, such as net realizable value in K-IFRS 1002, *Inventories*, or value in use in K-IFRS 1036, *Impairment of Assets*.

In addition, for financial reporting purposes, fair value measurements are categorized into Levels 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs for the asset or liability.

5. SIGNIFICANT CONSIDERATION AND MAJOR SOURCES OF ESTIMATION UNCERTAINTIES:

In applying the Group's accounting policies described in Note 2, management must make judgments that have a significant effect on the amounts recognized in the consolidated financial statements (except for those related to the estimates) and are not readily identifiable from other sources of estimates and assumptions about the carrying amounts of assets and liabilities. Estimates and related assumptions are based on historical experience and other factors considered relevant. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. The amendments to the accounting estimates are recognized in the period in which the amendment is made if such amendment affects only that period, and in the period in which amendments are made and in the future periods if they affect both the current and future periods.

(1) Critical judgments made during the application of accounting policies

The following items are significant judgments that are different from those related to the estimates (see Note 3 (2)), which is the result of the management's application of the Group's accounting policies and is most important to the amounts recognized in the consolidated financial statements. It affects things.

1) Deferred income tax assets
Future feasibility for deferred tax assets depends on a number of factors, including our ability to generate taxable income during the period in which the temporary difference is realized, the overall economic environment and industry outlook. The Company reviews these items periodically and recognizes deferred tax assets for temporary differences that it deems feasible as of the end of the reporting period.

(2) Main sources of estimated uncertainty

The principal sources of significant assumptions and other estimated uncertainties for the future, at the end of the reporting period, which have significant risk factors that could cause significant adjustments to the carrying amounts of assets and liabilities in the next financial year are as follows.

1) Uncertainty in total contract revenue estimates

Total contract revenue is measured initially at the contracted amount, but can be increased or decreased as a result of changes in the terms of the contract in the course of performing the contract, so that the measurement of contract revenue is subject to various uncertainties related to the outcome of future events. The Group includes in the contract revenue when it is more likely that the customer will approve the change in the amount of revenue due to changes in the terms of the contract or if it is more likely than not that the performance criteria will be met and the amount can be reliably measured.

2) Estimated total contract cost

The amount of the construction revenues is affected by the progress based on the cumulative incurred contract costs and the total contract costs are estimated based on future expectations, such as material costs, labor costs, project duration, etc. The Group estimates the significant changes are reviewed periodically and the changes are reflected in the calculation of progress as of the end of the reporting period.

3) Impairment inspection
The recoverable amount of the cash-generating unit to be reviewed for impairment is determined based on the value in use or the fair value, less costs to sell and is estimated based on future estimates.

4) Defined benefit retirement benefit system
The fair value of a financial instrument that is not traded in an active market is determined principally using valuation techniques. The Group makes judgments on the selection of various valuation techniques and assumptions based on important market conditions as of the end of the reporting period.

5) Fair value assessment of financial instruments
The fair value of a financial instrument that is not traded in an active market is determined principally using valuation techniques. The Group makes judgments on the selection of various valuation techniques and assumptions based on important market conditions as of the end of the reporting period.

6. SEGMENT INFORMATION:

(1) The Group divides its business into four business segments based on the types of goods sold and/or services rendered and information reported to the chief operating decision maker for the purpose of resource allocation and assessment of segment performance focus on the type of goods or services delivered or provided. The four business segments are LG Corp., S&I Corporation Co., Ltd., LG CNS Co., Ltd. and others. The Group's primary segment information is reported based on the business segments and each segment's accounting policies are the same as the ones described in Note 2.

(2) Revenue and equity method profits and profit before income tax for each business segment for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

		Revenue and gain (loss) on valuation by equity method (*1)		Profit before income tax (*2)	
Reporting sector	Business sector	Year ended December 31, 2018	Year ended December 31, 2017	Year ended December 31, 2018	Year ended December 31, 2017
LG Corp.	LG Corp.	₩ 757,197	₩ 714,844	₩ 553,960	₩ 1,119,058
Serveone Co., Ltd.	MRO	3,225,393	3,198,998	123,997	122,830
	MRO and others	2,350,400	2,511,038	168,353	53,254
	Serveone (Nanjing) Co., Ltd.	664,468	637,260	21,632	18,355
	Serveone Construction Co., Ltd.	413,206	246,240	19,953	21,124
	KONJIAM YEWON Co., Ltd.	1,325	1,282	(161)	45
	Serveone Guangzhou Co., Ltd.	298,066	207,668	8,263	11,162
	SERVEONE VIETNAM Co., Ltd.	243,823	170,156	19,170	7,887
	SERVEONE POLAND Sp.z o. o.	176,136	56,298	7,587	2,627
	Dream nuri	719	-	130	(8)
	Mirae M	4,880	-	(8,327)	-
	S&I VIETNAM CONSTRUCTION CO.,LTD. (*4)	-	-	(1,462)	(264)
LG CNS Co., Ltd.	LG CNS Co., Ltd.	2,828,574	2,388,652	148,929	166,793
	LG CNS China, Inc.	136,181	129,577	17,247	11,781
	LG CNS Europe B.V.	27,457	29,971	843	893
	LG CNS America, Inc.	84,730	67,506	(9,775)	5,007
	LG CNS India Pvt., Ltd.	11,739	10,238	639	382
	PT LG CNS Indonesia	9,839	13,416	(91)	(368)
	Entrue Brasil Servicos de T.I. Ltda.	3,988	4,101	734	313
	BizTechPartners Co., Ltd. (previous BNE Partners, Co., Ltd.) (*5)	96,567	98,314	2,557	4,408
	LG N-Sys Co., Ltd. (*6)	67,197	487,077	(379)	4,970
	SBI-LG Systems Co., Ltd. (*7)	-	20,393	-	(213)
	Korea Elecom Co., Ltd.	1,268	24,081	1,705	(327)
	LG CNS Colombia SAS	13,174	13,067	(5,645)	(528)
	LG CNS Malaysia Sdn Bhd	6,062	11,198	(1,283)	(868)
	LG CNS Saudi Arabia LLC	-	-	-	(129)
	LG CNS JAPAN Co., Ltd.	37,536	103,345	403	9,323
	Collain Healthcare, LLC (*8)	-	4,206	-	(3,560)
	LG CNS UZBEKISTAN, LLC	1,144	5,580	(78)	(623)
	Haengbokmaru Co., Ltd.	2,635	1,500	448	159
	LG CNS VIETNAM Co., Ltd	21,221	28,180	623	1,393
	LG CNS FUND LLC (*4)	-	-	(275)	-
	Sejong Green Power Co., Ltd (*9)	1,406	-	(380)	-
Others	LG Sports Ltd.	60,495	62,002	632	(3,474)
	LG Holdings Japan Co., Ltd.	7,943	8,309	3,859	4,458
	LG Management Development Institute	86,851	80,631	5,969	2,379
	LG Corp. U.S.A.	-	-	(731)	(463)
Subtotal		11,641,620	11,335,128	1,079,046	1,557,776
Consolidation adjustments (*10)		303,170	505,930	851,101	1,183,530
Total		₩ 11,944,790	₩ 11,841,058	₩ 1,930,147	₩ 2,741,306

(*1) Revenue by reporting segment is based on the amount before eliminating intercompany profit and loss.
(*2) Income before income tax expense by reportable segment is the profit or loss of each segment that does not allocate revenue and expenses to the common segment.

(*3) Changed name during this period.
(*4) Newly established during the year.
(*5) Merged BizTech Partners Co., Ltd. with BiTech Partners Co., Ltd. and changed its name to BizTech Partners Co., Ltd.
(*6) LG Corp. merged with LG Corp., the parent company of the Company during the period.
(*7) The remaining portion was transferred to LG CNS JAPAN CO., LTD.
(*8) Sold during the current term.
(*9) As a result, the Company has been transferred from the investment in associates to the subsidiary as a result of the obligation to purchase shares in accordance with the agreement. (see Note 30).
(*10) Amount of elimination of internal transactions and amount of equity method valuation.

(3) Assets for each business segment of the Group as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Business sector	December 31, 2018	December 31, 2017
LG Corp.	₩ 9,327,642	₩ 9,238,892
S&I Corporation Co., Ltd.	4,912,630	4,505,872
LG CNS Co., Ltd.	2,604,510	2,646,484
Others	675,169	687,958
Subtotal	17,519,951	17,079,206
Consolidation adjustments (*1)	5,315,960	4,459,123
Assets shown in the assets held for sale (*2)	-	109,368
Total	₩ 22,835,911	₩ 21,647,697

(*1) Consolidation adjustments consist of elimination of intercompany transactions with regard to assets of each segment and valuation of associates and joint ventures using the equity method.
(*2) Assets of the Lusem Co., Ltd. (see Note 39).

(4) Inventories sold and services rendered for each business segment of the Group for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Business sector	Inventories sold and services rendered	Year ended December 31, 2018	Year ended December 31, 2017
LG Corp.	Others	₩ 757,197	₩ 714,844
S&I Corporation Co., Ltd.	Merchandise	4,356,718	4,156,244
	Service	887,789	853,163
	Construction	2,100,836	1,996,327
	Others	33,073	23,206
LG CNS Co., Ltd.	Service	1,233,385	1,319,376
	Construction	1,377,011	1,309,386
	Merchandise	737,045	787,588
	Manufactured goods	1,115	24,052
Others	Service	86,850	80,631
	Others	68,438	70,311
Subtotal		11,639,457	11,335,128
Consolidation adjustments (*)		305,333	505,930
Total		₩ 11,944,790	₩ 11,841,058

(*) Consolidation adjustments consist of elimination of intercompany transactions with regard to assets of each segment and valuation of associates and joint ventures using the equity method.

(5) Regional revenue of the Group before elimination of intersegment transactions and valuation by equity method for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

Business sector	December 31, 2018	December 31, 2017
Korea	₩ 9,482,487	₩ 9,568,060
China	1,512,178	1,221,003
Other Asia	339,309	370,917
America	101,891	88,879
Europe	203,592	86,269
Total	₩ 11,639,457	₩ 11,335,128

(6) Regional non-current assets of the Group before elimination of intersegment transactions and valuation by equity method for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Business sector	December 31, 2018	December 31, 2017
Korea	₩ 11,550,859	₩ 10,696,424
China	26,859	28,839
Other Asia	272,881	233,637
America	195,963	107,369
Europe	575	1,541
Subtotal	12,047,137	11,067,810
Assets held for sale (*)	-	38,958
Total	₩ 12,047,137	₩ 11,106,768

(*) Non-current assets of the Lusem Co., Ltd. (see Note 39).

7. CLASSIFICATION OF FINANCIAL INSTRUMENTS AND FAIR VALUE:

(1) The carrying amount and fair value of financial assets and liabilities as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

1) Financial assets

Financial assets	Account	December 31, 2018 Carrying amount	December 31, 2018 Fair value	December 31, 2017 Carrying amount	December 31, 2017 Fair value
Cash and cash equivalents:	Cash and cash equivalents	₩ 1,054,293	₩ 1,054,293	₩ 1,309,949	₩ 1,309,949
Financial assets measured at FVTPL	Derivative assets for trading purposes	1,241	1,241	1,716	1,716
	Unmarketable equity securities	11,290	11,290	-	-
	Debt securities	5,114	5,114	-	-
	Subtotal	17,645	17,645	1,716	1,716
Derivative assets designated as hedging instrument:	Derivative assets designated as hedging instruments	-	-	82	82
Financial assets measured at FVTOCI	Marketable equity securities	35,755	35,755	46,875	46,875
	Unmarketable equity securities (*)	65,058	65,058	74,942	74,942
	Debt securities	-	-	-	-
	Subtotal	100,813	100,813	121,817	121,817
Financial assets(liabilities) measured at amortized cost	Financial institution deposits	348,699	348,699	438,214	438,214
	Trade receivables	2,780,989	2,780,989	3,049,038	3,049,038
	Loans	11,143	11,143	10,367	10,367
	Other accounts receivable	45,667	45,667	50,106	50,106
	Accrued income	3,551	3,551	3,270	3,270
	Deposits	9,520	9,520	20,090	20,090
	Subtotal	3,199,569	3,199,569	3,571,085	3,571,085
	Total	₩ 4,372,320	₩ 4,372,320	₩ 5,004,649	₩ 5,004,649

2) Financial liabilities

Financial liabilities	Account	December 31, 2018 Carrying amount	December 31, 2018 Fair value	December 31, 2017 Carrying amount	December 31, 2017 Fair value
Financial liabilities at FVTPL:	Derivative liabilities for trading purposes	₩ 181	₩ 181	₩ 1,864	₩ 1,864
Derivative liabilities designated as hedging instrument:	Derivative liabilities designated as hedging instruments	-	-	118	118
Financial liabilities measured at amortized cost:	Trade payables	1,634,670	1,634,670	2,261,617	2,261,617
	Borrowings	282,406	282,406	285,328	285,328
	Other accounts payable	110,917	110,917	140,293	140,293
	Accrued expenses	175,900	175,900	188,312	188,312
	Accrued dividends	342	342	328	328
	Deposits received	359,783	359,783	409,734	408,223
	Debentures	1,237,131	1,237,131	1,107,329	1,101,269
	Subtotal	3,801,149	3,801,149	4,392,941	4,385,370
	Total	₩ 3,801,330	₩ 3,801,330	₩ 4,394,923	₩ 4,387,352

8. CASH AND CASH EQUIVALENTS:

The cash and cash equivalents in the consolidated statements of cash flows are the same as the cash and cash equivalents in the consolidated statements of financial position. Details of cash and cash equivalents as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018	December 31, 2017
Cash on hand	₩ 3,151	₩ 506
Bank deposits	783,177	954,876
Other cash equivalents	267,965	354,567
Subtotal	1,054,293	1,309,949
Assets held for sale	-	32,922
Total	₩ 1,054,293	₩ 1,342,871

9. TRADE AND OTHER RECEIVABLES:

(1) Details of trade and other receivables before deducting accumulated impairment losses as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	December 31, 2018					
Description	Receivables neither impaired nor overdue	Receivables overdue but not impaired	Impaired receivables	Total	Consolidated adjustment	Consolidated
Trade receivables	₩ 2,791,709	₩ 204,879	₩ 27,527	₩ 3,024,115	₩ (208,917)	₩ 2,815,198
Other receivables	507,076	12,494	7,318	526,888	(451,696)	75,192
Total	₩ 3,298,785	₩ 217,373	₩ 34,845	₩ 3,551,003	₩ (660,613)	₩ 2,890,390

	December 31, 2017					
Description	Receivables neither impaired nor overdue	Receivables overdue but not impaired	Impaired receivables	Total	Consolidated adjustment	Consolidated
Trade receivables	₩ 3,220,991	₩ 160,493	₩ 27,722	₩ 3,409,206	₩ (333,680)	₩ 3,075,526
Other receivables	135,402	10,194	16,044	161,640	(64,139)	97,501
Total	₩ 3,356,393	₩ 170,687	₩ 43,766	₩ 3,570,846	₩ (397,819)	₩ 3,173,027

(2) Aging of trade and other receivables that are overdue but not impaired as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018	December 31, 2017
1–29 days	₩ 78,386	₩ 53,906
30–60 days	21,289	14,949
61–90 days	19,359	10,760
91–120 days	12,119	15,991
More than 121 days	86,220	75,081
Total	₩ 217,373	₩ 170,687

Since the experience of past credit losses of the Group shows significant loss of different customer segments, the provisioning rate based on past delinquency days is divided into different customer groups.

Meanwhile, the credit grant period is 60 to 120 days for each type of sales, and no interest is charged for accounts receivable. The Group measures the allowance for losses on trade receivables at an amount equal to the expected total ECLs. The ECLs on trade receivables are estimated using the default experience of the borrower and the provisional setup table based on the borrower's experience of the default and the current state of the borrower and are based on the specific factors of the borrower, and the general economic situation of the industry to which the borrower belongs and forecast directions. There are no estimating techniques or significant assumptions during the current period.

(3) Changes in accumulated impairment losses for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018				December 31, 2017			
	Trade receivables		Other receivables		Trade receivables		Other receivables	
Beginning balance	₩	26,488	₩	13,668	₩	27,935	₩	14,401
Impairment loss		10,057		(141)		10,000		900
Disposals of accounts receivable		(3,289)		(19,167)		(4,986)		(1,228)
Reversal of allowance for doubtful accounts		(1,197)		(529)		(473)		(460)
Effect of foreign currency translation		(630)		-		(200)		-
Others		5,562		11,481		(2,117)		72
Changes in the Group		(2,783)		(2)		-		-
Assets held for sale		-		-		(3,671)		(17)
Ending balance	₩	34,208	₩	5,310	₩	26,488	₩	13,668

(4) Aging of impaired trade and other receivables as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018		December 31, 2017	
Less than 7 months	₩	4,355	₩	1,068
7–12 months		650		333
More than 1 year		29,840		42,365
Total	₩	34,845	₩	43,766

10. INVENTORIES:

Details of inventories as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018					
	Acquisition cost		Carrying amount		Valuation allowance	
Merchandise	₩	108,234	₩	106,321	₩	(1,913)
Finished goods		-		-		-
Semifinished goods		-		-		-
Work in progress		133		133		-
Raw materials		7,017		5,717		(1,300)
Stored goods		322		322		-
Inventories in transit		3,655		3,655		-
Other inventories		408		-		(408)
Total	₩	119,769	₩	116,148	₩	(3,621)

Description	December 31, 2017					
	Acquisition cost		Carrying amount		Valuation allowance	
Merchandise	₩	103,126	₩	100,518	₩	(2,608)
Finished goods		-		-		-
Semifinished goods		-		-		-
Work in progress		59		59		-
Raw materials		6,210		5,240		(970)
Stored goods		222		222		-
Inventories in transit		3,826		3,826		-
Other inventories		648		124		(524)
Total	₩	114,091	₩	109,989	₩	(4,102)

11. OTHER ASSETS:

Details of other assets as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018 Current	December 31, 2018 Non-current	December 31, 2017 Current	December 31, 2017 Non-current
Advance payments	₩ 47,532	₩ 3,110	₩ 50,932	₩ 2,728
Prepaid expenses	36,086	6,309	28,035	5,813
Prepaid VAT	13,165	-	5,944	-
Due from customers for contract work	208,564	-	198,757	-
Others	44	-	1000	-
Total	₩ 305,391	₩ 9,419	₩ 284,668	₩ 8,541

12. PROPERTY, PLANT AND EQUIPMENT:

(1) Composition of the Group's property, plant and equipment as of December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

	December 31, 2018									
Description	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Other property	Total
Acquisition cost	₩440,166	₩1,223,552	₩266,671	₩ 144,772	₩26,134	₩ 4,948	₩ 216,109	₩ 36,726	₩ 490,935	₩2,850,013
Accumulated depreciation	-	(323,849)	(105,592)	(83,370)	(11,036)	(3,534)	(135,485)	-	(295,271)	(958,137)
Accumulated impairment	-	-	-	(12,085)	-	-	-	-	(235)	(12,320)
Government subsidies	-	(1,332)	-	-	(245)	(2)	(145)	-	(84)	(1,808)
Carrying amounts	₩440,166	₩ 898,371	₩161,079	₩ 49,317	₩14,853	₩ 1,412	₩ 80,479	₩ 36,726	₩ 195,345	₩1,877,748

	December 31, 2017									
Description	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Other property	Total
Acquisition cost	₩482,683	₩ 957,863	₩260,017	₩ 104,239	₩23,082	₩ 4,583	₩ 212,376	₩ 260,127	₩ 490,344	₩2,795,314
Accumulated depreciation	-	(281,991)	(92,913)	(62,878)	(10,061)	(2,916)	(141,952)	-	(289,196)	(881,907)
Accumulated impairment	-	-	-	-	-	-	-	-	(482)	(482)
Government subsidies	-	(1,073)	-	-	-	-	(152)	-	(160)	(1,385)
Carrying amounts	₩482,683	₩ 674,799	₩167,104	₩ 41,361	₩13,021	₩ 1,667	₩ 70,272	₩ 260,127	₩ 200,506	₩1,911,540

(2) Changes in property, plant and equipment for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018									
	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Other property	Total
Beginning balance	₩ 482,683	₩674,799	₩167,104	₩41,361	₩13,021	₩ 1,667	₩ 70,272	₩ 260,127	₩ 200,506	₩1,911,540
Acquisitions	2,202	36,704	346	83	1,821	386	17,353	93,408	37,713	190,016
Disposals	(2,371)	(53)	(42)	(15)	(181)	(4)	(254)	(24,543)	(1,623)	(29,086)
Depreciation	-	(44,321)	(12,780)	(7,796)	(2,074)	(669)	(18,427)	-	(42,018)	(128,085)
Transfers in	11,808	308,839	6,294	-	2,539	87	12,803	-	-	342,370
Transfers out	(54,156)	(79,253)	(759)	-	-	-	-	(294,895)	-	(429,063)
Government subsidies	-	(341)	-	-	(273)	(2)	(53)	-	-	(669)
Effect of consolidation scope changes(*1)	-	5,093	(12)	15,679	-	-	(21)	-	(558)	20,181
Impairment loss	-	-	-	-	-	-	-	-	(75)	(75)
Others	-	(3,032)	930	1	-	(64)	(1,190)	2,455	1,279	379
Effect of foreign currency translation	-	(64)	(2)	4	-	11	(4)	174	121	240
Ending balance	₩ 440,166	₩ 898,371	₩161,079	₩49,317	₩14,853	₩ 1,412	₩ 80,479	₩ 36,726	₩ 195,345	₩1,877,748

(*1) S&I VIETNAM CONSTRUCTION CO., LTD. and Sejong Green Power Co., Ltd. are included in the scope of consolidation.

Description	Year ended December 31, 2017									
	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Other property	Total
Beginning balance	₩ 517,227	₩1,023,211	₩207,040	₩236,696	₩17,537	₩ 9,129	₩ 68,748	₩ 182,541	₩ 219,261	₩2,481,390
Acquisitions	2,082	919	168	5,110	656	2,738	12,525	291,049	35,481	350,728
Disposals	(11,320)	(2,420)	(17)	(1,258)	(2,835)	(1,354)	(218)	(17,971)	(404)	(37,797)
Depreciation (*1)	-	(42,397)	(13,474)	(79,717)	(2,297)	(3,409)	(20,198)	-	(46,956)	(208,448)
Transfers in	39,062	47,363	487	44,426	48	-	15,754	2,453	2,447	152,040
Transfers out	(21,096)	(26,768)	(449)	-	-	-	-	(125,895)	(8,488)	(182,696)
Government subsidies	-	-	-	-	-	-	(86)	-	(14)	(100)
Changes due to disposals of subsidiaries (*2)	(38,582)	(305,141)	(26,213)	(147,238)	(89)	(2)	(5,488)	(72,097)	(23)	(594,873)
Transfers to assets held for sale (*3)	(1,102)	(10,673)	(337)	(17,058)	-	(116)	(390)	(2,637)	-	(32,313)
Impairment loss	(3,588)	(7,343)	(58)	-	-	(5,280)	(153)	-	(786)	(17,208)
Others	-	(977)	-	407	2	1	(124)	2,686	507	2,502
Effect of foreign currency translation	-	(975)	(43)	(7)	(1)	(40)	(98)	(2)	(519)	(1,685)
Ending balance	₩ 482,683	₩ 674,799	₩167,104	₩41,361	₩13,021	₩ 1,667	₩ 70,272	₩ 260,127	₩ 200,506	₩1,911,540

(*1) ₩86,142 million classified as profit or loss of discontinued operations is included.
(*2) Disposed LG Siltron Inc., a subsidiary, during the previous period.
(*3) Property, plant and equipment of Lusem Co., Ltd., which is classified as assets held for sale.

(3) Changes in government grants for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	Year ended December 31, 2018					
Description	Buildings	Tools and equipment	Vehicles	Furniture and fixtures	Other property	Total
Beginning balance	₩ 1,073	-	-	₩ 152	₩ 160	₩ 1,385
Receipt	391	2	273	75	-	741
Offsetting depreciation	(82)	-	(28)	(60)	(76)	(246)
Others	(50)	-	-	(22)	-	(72)
Ending balance	₩ 1, 332	2	245	₩ 145	₩ 84	₩ 1,808

	Year ended December 31, 2017					
Description	Buildings	Tools and equipment	Vehicles	Furniture and fixtures	Other property	Total
Beginning balance	₩ 1,137	-	-	₩ 120	₩ 317	₩ 1,574
Receipt	-	-	-	86	14	100
Offsetting depreciation	(56)	-	-	(54)	(171)	(281)
Others	(8)	-	-	-	-	(8)
Ending balance	₩ 1,073	-	-	₩ 152	₩ 160	₩ 1,385

13. INVESTMENT PROPERTY:

(1) Composition of investment property as of December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

	December 31, 2018				
Description	Land	Buildings	Structures	Construction in progress	Total
Acquisition cost	₩ 767,752	₩ 603,890	₩ 10,198	₩ 181,412	₩ 1,563,252
Accumulated depreciation	-	(141,946)	(4,395)	-	(146,341)
Carrying amounts	₩ 767,752	₩ 461,944	₩ 5,803	₩ 181,412	₩ 1,416,911

	December 31, 2017				
Description	Land	Buildings	Structures	Construction in progress	Total
Acquisition cost	₩ 708,472	₩ 560,070	₩ 9,246	₩ 84,013	₩ 1,361,801
Accumulated depreciation	-	(116,384)	(3,873)	-	(120,257)
Carrying amounts	₩ 708,472	₩ 443,686	₩ 5,373	₩ 84,013	₩ 1,241,544

(2) Changes in investment property for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	Year ended December 31, 2018									
Description		Land		Buildings		Structures		Construction in progress		Total
Beginning balance	₩	708,472	₩	443,686	₩	5,373	₩	84,013	₩	1,241,544
Acquisitions		-		1,383		590		91,147		93,120
Depreciation		-		(22,283)		(1,156)		-		(23,439)
Transfers		48,231		37,527		935		-		86,693
Disposals		(2,403)		(41)		-		-		(2,444)
Others		13,452		1,672		61		6,252		21,437
Ending balance	₩	767,752	₩	461,944	₩	5,803	₩	181,412	₩	1,416,911

	Year ended December 31, 2017									
Description		Land		Buildings		Structures		Construction in progress		Total
Beginning balance	₩	483,190	₩	374,059	₩	5,656	₩	821	₩	863,726
Acquisitions		234,777		67,901		-		100,239		402,917
Depreciation		-		(19,767)		(1,153)		-		(20,920)
Transfers		15,018		26,722		960		(12,044)		30,656
Disposals		(6,348)		(2,912)		-		-		(9,260)
Others		(18,165)		(2,317)		(90)		(5,003)		(25,575)
Ending balance	₩	708,472	₩	443,686	₩	5,373	₩	84,013	₩	1,241,544

(3) Details of the fair value of investment property as of December 31, 2018, are as follows (Unit: Korean won in millions):

		December 31, 2018		
Description	Date of revaluation	Land	Buildings and structures	Total
Book value of investment property:				
Book value (*1)		₩ 871,201	₩ 878,307	₩ 1,749,508
Results of valuation:				
Pyeongtaek HUB Center (*1), (*2)	2017-03-31	24,166	25,444	49,610
Twin Tower (*1), (*3)	2018-02-13	581,400	318,600	900,000
Gasandong building (*1)	2018-02-13	78,889	92,608	171,497
Gwanghwamun building (*1)	2018-02-13	216,070	93,930	310,000
Buho building (*1)	2018-02-13	18,174	14	18,188
Seoul Station building (*2)	2016-09-30	136,793	73,941	210,734
Incheon IT Center (*1), (*4)	2009-01-01	15,391	9,169	24,560
Sangam DDMC (*1), (*4)	2014-10-01			260,635
Kyobashi Trust Tower (*1), (*2)	2014-04-01	169,382	79,710	249,092
North America building (*2), (*5)	2017-06-29	65,638	128,598	194,236
Sangdodong Hi Plaza (*2), (*5)	2017-06-30	5,445	1,760	7,205
Dogokdong Gangnam building (*2), (*5)	2017-12-31	167,077	71,918	238,995
Others (*2)	2016-02-26	755	-	755
Total				₩2,635,507

(*1) Includes the value of investment property (carrying value that is subject to valuation: ₩332,597 million) occupied by the owner.
(*2) Acquisition cost is considered as fair value.
(*3) It is the whole valuation amount of Twin Tower.
(*4) It is the whole valuation amount of Incheon IT Center and Sangam DDMC. Sangam DDMC is an appraisal value of the entire real estate, including land, buildings and structures. The amount of appraisal value allocated to the holding area ratio of the consolidated entity is ₩78,191 million.
(*5) Newly acquired during the previous period.

Fair value assessment was performed by an independent third party, Nara Appraisal Co., Ltd., Samchang Appraisal Co., Ltd. and Daeil Appraisal Board.

The fair value of investment property is classified as Level 3 based on the input variables that are used in the valuation method.

The valuation method for measurement of fair value is the method of discounted cash flow, so the fair value of investment property is measured by the discounted present value that the net cash flow from the investment property is discounted by the discount rate of risk adjustment by reflecting the cost in relation to rental promotion, such as estimated success rate of rental market, vacant period, rental rate, free rental period and other costs that the lessee does not pay. Main input variables that are significant for measuring the fair value, but not observable, are estimated success rate of rental market, vacant rate, free rental period and discount rate of risk adjustment.

Meanwhile, the Group recognized rental income of ₩128,111 million and ₩109,916 million, respectively, for investment property.

14. INTANGIBLE ASSETS:

(1) Composition of the Group's intangible assets as of December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

Description	December 31, 2018 Development costs	Intellectual property rights	Memberships	Goodwill	Construction in progress	Computer software and other assets	Total
Acquisition cost	₩ 41,185	₩ 18,682	₩ 27,439	₩ 15,242	₩ 8,489	₩ 190,132	₩ 301,169
Accumulated depreciation	(27,564)	(11,125)	-	-	-	(137,065)	(175,754)
Accumulated impairment	(6,850)	(1)	(4,854)	(13,576)	(46)	(196)	(25,523)
Government grants	-	-	-	-	-	(53)	(53)
Total	₩ 6,771	₩ 7,556	₩ 22,585	₩ 1,666	₩ 8,443	₩ 52,818	₩ 99,839

Description	December 31, 2017 Development costs	Intellectual property rights	Memberships	Goodwill	Construction in progress	Computer software and other assets	Total
Acquisition cost	₩ 36,457	₩ 17,372	₩ 26,294	₩ 14,462	₩ 8,412	₩ 183,885	₩ 286,882
Accumulated depreciation	(27,847)	(9,963)	-	-	-	(129,907)	(167,717)
Accumulated impairment	(6,850)	(2)	(4,755)	(12,797)	(47)	(195)	(24,646)
Government grants	-	-	-	-	-	(125)	(125)
Total	₩ 1,760	₩ 7,407	₩ 21,539	₩ 1,665	₩ 8,365	₩ 53,658	₩ 94,394

(2) Changes in intangible assets for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018 Development costs	Intellectual property rights	Memberships	Goodwill	Construction in progress	Computer software and other assets	Total
Beginning balance	₩ 1,760	₩ 7,407	₩ 21,539	₩ 1,665	₩ 8,365	₩ 53,658	₩ 94,394
Acquisitions	(9)	8	1,024	-	15,218	10,854	27,095
Increase due to internal development	-	-	-	-	698	-	698
Disposals	(29)	(4)	(321)	-	-	(1,098)	(1,452)
Transfers in	7,970	4	500	-	65	6,778	15,317
Transfers out	-	-	-	-	(15,317)	-	(15,317)
Increase due to business combination	-	-	-	779	-	(29)	750
Impairment loss	-	-	(100)	(779)	-	-	(879)
Amortization (*1)	(2,922)	(1,297)	-	-	-	(18,175)	(22,394)
Others	-	1,438	(56)	-	(586)	840	1,636
Effect of foreign currency translation	1	-	(1)	-	-	(9)	(9)
Ending balance	₩ 6,771	₩ 7,556	₩ 22,585	₩ 1,665	₩ 8,443	₩ 52,819	₩ 99,839

Description	Development costs	Intellectual property rights	Memberships	Goodwill	Construction in progress	Computer software and other assets	Total
	Year ended December 31, 2017						
Beginning balance	₩ 7,727	₩ 8,619	₩ 23,086	₩ 2,185	₩ 10,429	₩ 61,962	₩ 114,008
Acquisitions	-	8	4,112	-	18,562	7,467	30,149
Disposals	(181)	(316)	(2,898)	(520)	-	(39)	(3,954)
Transfers in	233	-	14	-	637	18,082	18,966
Transfers out	-	-	-	-	(18,966)	-	(18,966)
Government subsidies	-	-	-	-	-	(19)	(19)
Impairment loss	(198)	(1,510)	-	-	-	(78)	(1,786)
Amortization (*1)	(5,568)	(1,360)	-	-	-	(21,124)	(28,052)
Transfers to assets held for sale(*3)	-	(28)	(618)	-	(3)	(1,547)	(2,196)
Disposals of subsidiaries (*2)	(245)	-	(2,151)	-	(2,001)	(10,800)	(15,197)
Others	1	1,994	-	-	(166)	37	1,866
Effect of foreign currency translation	(9)	-	(6)	-	(127)	(283)	(425)
Ending balance	₩ 1,760	₩ 7,407	₩ 21,539	₩ 1,665	₩ 8,365	₩ 53,658	₩ 94,394

(*1) ₩2,997 million classified as profit or loss of discontinued operations is included.
(*2) Intangible assets of the Lusem Co., Ltd. (see Note 38).
(*3) Disposed LG Siltron Inc., a subsidiary, during the previous period (see Note 36).

(3) Details of book value of goodwill that is allocated to cash-generating unit are as follows (Unit: Korean won in millions):

Description	Acquisition cost	Accumulated depreciation	Book value
	Year ended December 31, 2018		
Sejong Green Power (*2)	₩ 779	₩ (779)	₩ -
BizTechPartners Co., Ltd.	1,665	-	1,665
Korea Elecom Co., Ltd. (*1)	7,964	(7,964)	-
Total	₩ 10,408	₩ (8,743)	₩ 1,665

Description	Acquisition cost	Accumulated depreciation	Book value
	Year ended December 31, 2017		
LG CNS Co., Ltd.	₩ -	₩ -	₩ -
BizTechPartners Co., Ltd.	1,665	-	1,665
Korea Elecom Co., Ltd. (*1)	7,964	(7,964)	-
Total	₩ 9,629	₩ (7,964)	₩ 1,665

(*1) Management recognized impairment loss for the whole goodwill as the total book value of cash-generating unit exceeded the estimated recoverable amount and the exceeding amount is larger than the carrying value of goodwill. There are no assets other than goodwill that the impairment loss will be allocated.
(*2) Transferred to the scope of consolidation during the current period and the related goodwill was fully impaired.

(4) Changes in government grants for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018					
	Intellectual property rights		Computer software and other assets		Total	
Beginning balance	₩	-	₩	125	₩	125
Receipt		-		(55)		(55)
Offsetting amortization		-		(17)		(17)
Ending balance	₩	-	₩	53	₩	53

Description	Year ended December 31, 2017					
	Intellectual property rights		Computer software and other assets		Total	
Beginning balance	₩	9	₩	274	₩	283
Receipt		-		19		19
Offsetting amortization		(9)		(168)		(177)
Ending balance	₩	-	₩	125	₩	125

(5) The costs related to research and development, accounted for as expenses, for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017 (*)	
Manufacturing statement	₩	-	₩	29,233
Selling and administrative expenses		33,731		24,133
Total	₩	33,731	₩	53,366

(*) The expenditures incurred from discontuinued operations (₩ 36,604) of the previous period are included.

15. INVESTMENTS IN ASSOCIATES AND JOINT VENTURES:

(1) Composition of the Group's investments in associates and joint ventures as of December 31, 2018, is as follows:

Companies	Location of incorporation	Major business activities	Closing date	Number of shares held and investments in capital		Number of shares issued		Percentage of ownership (%)	Percentage of ownership (common stock) (%)
				Common stock	Preferred stock	Common stock	Preferred stock		
LG Chem Ltd.	South Korea	Manufacturing of basic petrochemicals	12-31	23,534,211	-	70,592,343	7,688,800	30.06%	33.34%
LG Household & Health Care Ltd.	South Korea	Manufacturing of toothpastes, soap and detergents	12-31	5,315,500	-	15,618,197	2,099,697	30.00%	34.03%
LG Electronics Inc.	South Korea	Manufacturing of electronic components, computers, image, acoustic and communication equipment	12-31	55,094,582	-	163,647,814	17,185,992	30.47%	33.67%
LG Uplus Corp.	South Korea	Telecommunications	12-31	157,376,777	-	436,611,361	-	36.05%	36.05%
LG International Corp.	South Korea	Trade and resource development	12-31	9,571,336	-	38,760,000	-	24.69%	24.69%
LG Hitachi Co., Ltd.	South Korea	Consult computer system integration and establishment	12-31	245,000	-	500,000	-	49.00%	49.00%
GIIR Corporation	South Korea	Holdings company	12-31	5,798,593	-	16,567,409	-	35.00%	35.00%
LG Hausys, Ltd.	South Korea	Manufacturing of construction plastic materials	12-31	3,006,673	-	8,967,670	1,032,330	30.07%	33.53%
LG MMA Corp. (*1)	South Korea	Manufacturing of other basic organic chemicals	12-31	1,200,000	-	2,400,000	-	50.00%	50.00%
Silicon Works Co., Ltd.	South Korea	Design and manufacturing of semiconductor	12-31	5,380,524	-	16,264,300	-	33.08%	33.08%
LG Fuel Cell Systems Inc. (*2)	America	Development of fuel cells for research and experimental development	12-31	572	-	2,737	-	20.90%	20.90%
ZKW Fuel Cell Systems Inc. (*3)	Austria		12-31	-	-	-	-	30.00%	30.00%
Momment Gewerbelmmobilien Verwaltungs GmbH(*3)	Austria		12-31	-	-	-	-	30.00%	30.00%
Combustion Synthesis Co., Ltd. (*4),	Japan	Manufacturing of the combustion synthesis power and manufactured goods	12-31	975,000	-	2,031,000	-	48.01%	48.01%
Korea Smart Card Co., Ltd.	South Korea	System software development and supply	12-31	3,927,167	-	11,934,085	-	32.91%	32.91%
Songdo U-Life LLC (*5)	South Korea	Health care, integrated wireless environment, integrated smart cards and building management	12-31	5,880	-	35,880	-	16.39%	16.39%
Recaudo Bogota S.A.S.	Colombia	Public system development and service	12-31	2,126	-	10,630	-	20.00%	20.00%
Hellas SmarTicket Societe Anonyme	Greece	Public system development and service	12-31	22,500	-	75,000	-	30.00%	30.00%
Ulleungdo Natural Energy Independent Island Co., Ltd.	South Korea	New and renewable energy	12-31	1,600,000	-	5,360,000	-	29.85%	29.85%
Dongnam Solar Energy Co., Ltd.	South Korea	The sun optical-the development business	12-31	174,608	-	672,000	-	25.98%	25.98%
Daegu Clean Energy Co., Ltd.	South Korea	Energy supply	12-31	25,000	-	100,000	-	25.00%	25.00%
KEPCO-LG CNS Mangilao Holdings LLC(*6)	America	New and renewable energy	12-31	-	-	-	-	-	-

(*1) Corresponds to joint enterprise.

(*2) During the current year, equity ratio increased due to uneven growth.

(*3) Newly acquired during the current period. The corporation does not issue real stocks and does not indicate the number of shares.

(*4) During the current year, the equity ratio decreased due to the increase in the number of shares.
(*5) Although the Company owns less than 20% of its shares, the Company has significant influence over the contractual right to appoint one director to the board of directors.
(*6) Established during the year and has committed to investing 30% before or after investing. The Company has significant influence over the board of directors by the contractual right to appoint a director.

Fair values of marketable equity securities for investments in associates as of December 31, 2017, are as follows (Unit: Korean won in millions):

Description	LG Chem Ltd.	LG Household & Health Care Ltd.	LG Electronics Inc.	LG Uplus Corp.	LG International Corp.	GIIR Corporation	LG Hausys, Ltd.	Silicon Works Co., Ltd.
Fair values of equity securities	₩ 8,166,371	₩ 5,852,366	₩ 3,432,392	₩ 2,777,700	₩ 146,920	₩ 43,663	₩ 170,178	₩ 180,786

(2) Changes in investments in associates and joint ventures for the years ended December 31, 2018 and 2017, are as follows (Korean won in millions):

	Year ended December 31, 2018							
Companies	Beginning balance	Adjustment from revised K-IFRS	Acquisitions	Dividends received	Gain (loss) from valuation	Gain from valuation recognized in accumulated other comprehensive income	Disposal and others	Ending balance
LG Chem Ltd.	₩ 4,845,564	₩ -,	₩ -	₩ (141,205)	₩ 454,254	₩ (30,151)	₩ -	₩5,128,462
LG Household & Health Care Ltd.	943,955	(741)	-	(47,840)	216,691	(4,598)	-	1,107,467
LG Electronics Inc.	3,941,795	1,079	-	(22,038)	365,464	(43,198)	-	4,243,102
LG Uplus Corp.	1,853,940	469,794	-	(62,951)	166,397	3,559	-	2,430,739
LG International Corp.	296,741	1,089	-	(2,393)	(19,404)	2,401	-	278,434
LG Hitachi Co., Ltd.	8,704	-	-	(3)	756	(792)	-	8,665
GIIR Corporation	52,316	(582)	-	(1,450)	6,553	(359)	-	56,478
LG Hausys, Ltd.	290,933	(78)	-	(5,412)	(16,024)	772	-	270,191
LG MMA Corp.	254,010	-	-	(51,000)	86,691	(944)	-	288,757
Silicon Works Co., Ltd.	173,578	(375)	-	(3,766)	12,703	(533)	-	181,607
LG Fuel Cell Systems Inc. (*1)	24,096	-	4,529	-	(11,962)	193	(16,856)	-
ZKW Holding GmbH	-	-	404,713		8,495	(3,680)		409,528
Momment Gewerbelmmobilien Verwaltungs GmbH	-	-	15,289		60	38		15,387
Combustion Synthesis Co., Ltd.	1,562	-	-	-	(303)	1	718	1,978
Korea Smart Card Co., Ltd.	45,635	-	-	-	2,890	(738)	-	47,787
Songdo U-Life LLC	7,914	-	-	-	(465)	-	(6,738)	711
Recaudo Bogota S.A.S. (*2)	2,575	-	-	-	(1,378)	(1,197)	-	-
Sejong Green Power Co., Ltd. (*3)	-	-	-	-	-	-	-	-
Hellas SmarTicket Societe Anonyme	2,920	-	-	-	831	(13)	-	3,738
Ulleungdo Natural Energy Independent Island Co., Ltd.	6,371	-	-	-	(1,748)	6	(71)	4,558
Dongnam Solar Energy Co., Ltd.	607	-	-	-	32	-	-	639
Daegu Clean Energy Co., Ltd.	10	-	-	-	5	-	(15)	-
KEPCO-LG CNS Mangilao Holdings LLC(*4)	-	-	-	-	-	-	-	-
Total	₩12,753,226	₩470,186	₩ 424,531	₩ (338,058)	₩1,270,538	₩ (79,233)	₩ (22,962)	₩14,478,228

(*1) Recognized the total amount of impairments during the period.
(*2) Due to the cumulative loss during the year, the application of the equity method was discontinued and the equity method loss of ₩ 230 million was not recognized.
(*3) As a result of the acquisition of control,
(*4) Accumulated equity method losses of ₩ 658 million and accumulated other comprehensive income of ₩ 77 million were recognized in short-term loans.

	Year ended December 31, 2017						
Companies	Beginning balance	Acquisitions	Dividends received	Gain (loss) from valuation	Gain from valuation recognized in accumulated other comprehensive income	Disposal and others	Ending balance
LG Chem Ltd. (*1)	₩ 4,142,196	₩ 343,185	₩ (111,097)	₩ 592,949	₩ (45,267)	₩ (76,402)	₩4,845,564
LG Household & Health Care Ltd.	754,566	-	(39,866)	190,772	38,483	-	943,955
LG Electronics Inc.	3,587,295	-	(22,038)	503,196	(126,658)	-	3,941,795
LG Uplus Corp.	1,705,684	-	(55,082)	198,888	4,450	-	1,853,940
LG International Corp. (*2)	-	296,741	-	-	-	-	296,741
LG Life Science Co., Ltd. (*1)	-	-	-	-	84,696	(84,696)	-
LG Hitachi Co., Ltd.	8,564	-	(7)	4	143	-	8,704
GIIR Corporation	48,004	-	(1,450)	5,493	269	-	52,316
LG Hausys, Ltd.	275,070	-	(5,412)	21,763	(488)	-	290,933
LG MMA Corp.	216,441	-	(21,000)	58,400	169	-	254,010
Silicon Works Co., Ltd.	167,035	-	(4,842)	11,676	(291)	-	173,578
LG Fuel Cell Systems Inc.	7,542	21,920	-	(9,679)	(110)	4,423	24,096
Combustion Synthesis Co., Ltd.	1,210	537	-	(171)	(14)	-	1,562
Korea Smart Card Co., Ltd.	42,110	-	-	4,055	(530)	-	45,635
Songdo U-Life LLC	7,915	-	-	(1)	-	-	7,914
Recaudo Bogota S.A.S.	4,000	-	-	1,227	(1,726)	(926)	2,575
Sejong Green Power Co., Ltd.	1,165	-	-	(922)	-	(243)	-
Hellas SmarTicket Societe Anonyme	2,749	-	-	146	25	-	2,920
Ulleungdo Natural Energy Independent Island Co., Ltd.	6,895	-	-	(525)	1	-	6,371
Dongnam Solar Energy Co., Ltd.	588	-	-	20	(1)	-	607
Daegu Clean Energy Co., Ltd.	125	-	-	(115)	-	-	10
Serveone Cenyar Services Co. (*3)	-	-	-	-	32	(32)	-
KEPCO-LG CNS Mangilao Holdings LLC (*4)	-	-	-	-	-	-	-
Total	₩10,979,154	₩ 662,383	₩ (260,794)	₩1,577,176	₩ (46,817)	₩ (157,876)	₩12,753,226

(*1) Merged with LG Life Science Co., Ltd. during the previous period. The Group recognized ₩182,086 million gains on disposals of investments in associates.
(*2) The Group acquired its shares in LG International Co., Ltd. at the end of November 2017 and is in the process of allocating acquisition prices for the transfer price.
(*3) Liquidated during the current period. The Group recognized ₩32 million loss on disposals of investments in associates.
(*4) Equity method losses of ₩83 million and other comprehensive income of ₩4 million were recognized as allowance for short-term loans.

(3) Adjustments to the book value of investments in associates and joint ventures from the net asset value of associates and joint ventures as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	As of and for the year ended December 31, 2018					
Companies	Net assets (A)	Ownership rate of the Group (B)	Controlling interest of net assets (A x B)	(+)Goodwill	(-)Elimination of intercompany transactions	Ending balance
LG Chem Ltd.	₩ 17,083,044	30.72%	₩ 5,247,672	₩ 6,154	₩ (125,364)	₩ 4,845,564
LG Household & Health Care Ltd.	3,512,066	31.72%	1,114,129	-	(6,662)	943,955
LG Electronics Inc.	14,253,268	30.47%	4,342,539	-	(99,437)	5,128,462
LG Uplus Corp.	6,853,231	36.05%	2,470,250	-	(39,511)	1,107,467
LG International Corp.	1,128,497	24.69%	278,669	1,116	(1,351)	278,434
LG Hitachi Co., Ltd.	17,699	49.00%	8,673	-	(8)	8,665
GIIR Corporation	168,439	35.00%	58,954	2,352	(4,828)	56,478
LG Hausys, Ltd.	916,748	30.07%	275,636	-	(5,445)	270,191
LG MMA Corp.	587,938	50.00%	293,969	-	(5,212)	288,757
Silicon Works Co., Ltd.	446,614	33.08%	147,748	35,201	(1,342)	181,607
LG Fuel Cell Systems Inc.	6,663	20.90%	1,392	15,473	(16,865)	-
ZKW Holding GmbH	612,339	30.00%	183,702	226,055	(229)	409,528
Momment Gewerbelmmobilien Verwaltungs GmbH	13,506	30.00%	4,052	11,344	(9)	15,387
Combustion Synthesis Co., Ltd.	889	48.01%	427	1,551	-	1,978
Korea Smart Card Co., Ltd.	118,517	32.91%	39,001	8,777	9	47,787
Songdo U-Life LLC	24,139	16.39%	3,956	3,493	(6,738)	711
Recaudo Bogota S.A.S.	3,476	20.00%	695	-	(695)	-
Hellas SmarTicket Societe Anonyme	12,460	30.00%	3,738	-	-	3,738
Ulleungdo Natural Energy Independent Island Co., Ltd.	15,508	29.85%	4,629	-	(71)	4,558
Dongnam Solar Energy Co., Ltd.	2,454	25.98%	638	1	-	639
Daegu Clean Energy Co., Ltd.	61	25.00%	15	-	(15)	-

(*)The equity ratio reflects the effect of treasury stock and may be a different from ownership percentage.

	As of and for the year ended December 31, 2017					
Companies	Net assets (A)	Ownership rate of the Group (B)	Controlling interest of net assets (A x B)	(+)Goodwill	(-)Elimination of intercompany transactions	Ending balance
LG Chem Ltd.	₩ 16,168,526	30.72%	₩ 4,966,729	₩ 6,154	₩ (127,319)	₩ 4,845,564
LG Household & Health Care Ltd.	2,997,069	31.72%	950,754	-	(6,799)	943,955
LG Electronics Inc.	13,224,261	30.47%	4,029,023	-	(87,228)	3,941,795
LG Uplus Corp.	5,232,870	36.05%	1,886,188	-	(32,248)	1,853,940
LG International Corp.	1,194,391	24.69%	294,941	1,800	-	296,741
LG Hitachi Co., Ltd.	17,786	49.00%	8,715	-	(11)	8,704
GIIR Corporation	156,880	35.00%	54,908	2,352	(4,944)	52,316
LG Hausys, Ltd.	985,581	30.07%	296,332	-	(5,399)	290,933
LG MMA Corp.	516,205	50.00%	258,102	-	(4,092)	254,010
Silicon Works Co., Ltd.	412,225	33.08%	136,372	37,989	(783)	173,578
LG Fuel Cell Systems Inc.	42,818	20.53%	8,791	15,305	-	24,096
Combustion Synthesis Co., Ltd.	(26)	68.13%	(18)	1,580	-	1,562
Korea Smart Card Co., Ltd.	112,017	32.91%	36,862	8,777	(4)	45,635
Songdo U-Life LLC	26,975	16.39%	4,421	3,493	-	7,914
Recaudo Bogota S.A.S.	17,503	20.00%	3,501	-	(926)	2,575
Sejong Green Power Co., Ltd.	1,191	19.91%	237	6	(243)	-
Hellas SmarTicket Societe Anonyme	9,733	30.00%	2,920	-	-	2,920
Ulleungdo Natural Energy Independent Island Co., Ltd.	21,342	29.85%	6,371	-	-	6,371
Dongnam Solar Energy Co., Ltd.	2,332	25.98%	606	1	-	607
Daegu Clean Energy Co., Ltd.	40	25.00%	10	-	-	10

(*)The equity ratio reflects the effect of treasury stock and may be a different from ownership percentage.

(4) Summary of financial position for associates as of December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

	December 31, 2018								
Companies	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities	Equity attributable to the owners of the parent company	Non-controlling interests	Total equity
LG Chem Ltd. (*)	₩12,088,512	₩ 16,855,625	₩ 28,944,137	₩ 7,273,534	₩ 4,348,475	₩11,622,009	₩17,083,044	₩239,084	₩17,322,128
LG Household & Health Care Ltd.	1,691,203	3,584,671	5,275,874	1,358,883	322,971	1,681,854	3,512,066	81,954	3,594,020
LG Electronics Inc. (*)	19,362,854	24,965,588	44,328,442	17,135,028	10,886,507	28,021,535	14,253,268	2,053,639	16,306,907
LG Uplus Corp.	4,247,244	9,692,705	13,939,949	3,832,967	3,253,613	7,086,580	6,853,231	138	6,853,369

(*)LG Chem Ltd. and LG Electronics Inc. each recorded ₩2,764 million and ₩115,212 million, respectively, of assets (liabilities) held for sale as of December 31, 2018.

	December 31, 2017								
Companies	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities	Total liabilities	Equity attributable to the owners of the parent company	Non-controlling interests	Total equity
LG Chem Ltd. (*)	₩11,205,581	₩ 13,835,640	₩ 25,041,221	₩ 6,638,689	₩ 2,063,955	₩8,702,644	₩16,168,526	₩170,051	₩16,338,577
LG Household & Health Care Ltd.	1,513,346	3,264,624	4,777,970	1,244,057	451,296	1,695,353	2,997,069	85,548	3,082,617
LG Electronics Inc. (*)	19,194,969	22,025,989	41,220,958	17,536,470	9,010,805	26,547,275	13,224,261	1,449,422	14,673,683
LG Uplus Corp.	3,072,986	8,862,466	11,935,452	3,664,552	3,037,915	6,702,467	5,232,870	115	5,232,985

(*) LG Chem Ltd. and LG Electronics Inc. each recorded ₩6,595 million (₩31 million) and ₩21,436 million, respectively, of assets (liabilities) held for sale as of December 31, 2017.

(5) Summary of profit and loss for associates for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

	Year ended December 31, 2018					
Companies	Revenue	Operating income (loss)	Income tax expense	Profit (loss) from discontinued operations after tax	Accumulated other comprehensive income (loss)	Total comprehensive income (loss)
LG Chem Ltd.	₩ 28,183,013	₩ 2,246,070	₩ 420,735	₩ -	₩ (86,477)	₩ 1,432,835
LG Household & Health Care Ltd.	6,747,537	1,039,250	263,726	-	203	692,482
LG Electronics Inc.	61,341,664	2,703,291	535,760	-	(140,567)	1,332,247
LG Uplus Corp.	12,125,051	730,945	166,658	-	14,993	496,603

	Year ended December 31, 2017					
Companies	Revenue	Operating income (loss)	Income tax expense	Profit (loss) from discontinued operations after tax	Accumulated other comprehensive income (loss)	Total comprehensive income (loss)
LG Chem Ltd.	₩ 25,698,014	₩ 2,928,457	₩ 541,922	₩ -	₩ (146,077)	₩ 1,875,896
LG Household & Health Care Ltd.	6,270,464	930,351	242,855	-	(16,054)	602,495
LG Electronics Inc.	61,396,284	2,468,549	688,594	-	(435,822)	1,433,696
LG Uplus Corp.	12,279,382	826,295	119,702	-	12,349	559,467

16. DEBENTURES AND BORROWINGS:

(1) The Group's short-term borrowings as of December 31, 2018 and 2017, consist of the following (Unit: Korean won in millions):

Description	Creditor	Annual interest rate (%)	December 31, 2018	December 31, 2017
Korean currency short-term borrowings	Kookmin Bank and others	3.19–3.92	₩ 20,521	₩ 20,900
Overdraft	Kookmin Bank	3.59–3.62	7,303	7,191
Foreign currency short-term borrowings	The Export-Import Bank of Korea and others	0.74–8.00	45,132	30,995
Total			₩ 72,956	₩ 59,086

(2) The Group's long-term borrowings as of December 31, 2018 and 2017, consist of the following (Unit: Korean won in millions):

Description	Creditor	Annual interest rate (%)	December 31, 2018		December 31, 2017	
			Current	Non-current(*1)	Current	Non-current
Korean currency long-term borrowings (*1)	Shinhan Bank and others	2.76–6.40	₩ 51,651	₩ 85,286	₩ 80,852	₩ 108,672
Foreign currency long-term borrowings	SMBC	0.67~3.47	-	74,070	-	37,964
Debentures in Korean won	Public offering bonds	1.92–2.99	110,000	1,130,000	240,000	870,000
Discount on debentures			(125)	(2,744)	(126)	(2,545)
Present value discount account			-	(1,557)	-	(1,246)
Total			₩ 161,526	₩ 1,285,055	₩ 320,726	₩ 1,012,845

(*1) Information on non-current long-term borrowings as of December 31, 2018, is as follows (Unit: Korean won in millions):

Remaining maturity	1 year-2 years	2 years-3 years	More than 3 years
Balance	₩ 1,652	₩ 51,652	₩ 106,052

(3) The Group's debentures as of December 31, 2018 and 2017, consist of the following (Unit: Korean won in millions):

Company	Description	Issuance date	Maturity date	Annual interest rate	December 31, 2018	December 31, 2017
LG CNS Co., Ltd.	7th public offering	2013-05-07	2018-05-07	2.96%	₩ -	₩ 100,000
	9-1st public offering	2015-04-16	2018-04-16	1.88%	-	50,000
	9-2nd public offering	2015-04-16	2020-04-16	2.07%	100,000	100,000
	9-3rd public offering	2015-04-16	2022-04-16	2.44%	50,000	50,000
	10-1st public offering	2017-04-11	2020-04-11	2.10%	110,000	110,000
	10-2nd public offering	2017-04-11	2022-04-11	2.45%	40,000	40,000
	11-1st public offering	2018-04-11	2020-04-11	2.55%	90,000	-
	11-2nd public offering	2018-04-11	2023-04-11	2.83%	110,000	-
	2-2nd public offering(*1)	2015-05-29	2020-05-29	2.89%	20,000	-
S&I Corporation Co., Ltd. (*2)	4-1st public offering	2015-10-01	2018-10-01	1.96%	-	50,000
	4-2nd public offering(*2)	2015-10-01	2020-10-01	2.24%	-	150,000
	5-1st public offering	2016-10-27	2019-10-27	1.92%	110,000	110,000
	5-2nd public offering	2016-10-27	2021-10-27	2.10%	90,000	90,000
	6-1st public offering	2017-11-01	2020-11-01	2.64%	70,000	70,000
	6-2nd public offering	2017-11-01	2022-11-01	2.99%	130,000	130,000
	7-1st public offering	2018-05-04	2021-05-04	2.62%	70,000	-
	7-2nd public offering	2018-05-04	2023-05-04	2.98%	100,000	-
Serveone Co., Ltd. (*2)	4-2nd public offering(*2)	2015-10-01	2020-10-01	2.24%	150,000	-
LG N-Sys Co., Ltd. (*1)	2-1st public offering	2015-05-29	2018-05-29	2.32%	-	40,000
	2-2nd public offering	2015-05-29	2020-05-29	2.89%	-	20,000
	Subtotal				1,240,000	1,110,000
	Discount on debentures				(2,869)	(2,671)
	Current debentures (*3)				(109,875)	(239,874)
	Total				₩ 1,127,256	₩ 867,455

(*1) The merger was merged into LG CNS Co., Ltd. during the current term. 2-2nd public offering debentures issued by LG Engineering Co., Ltd. were transferred from LG CNS Co., Ltd.
(*2) Serve-one Co., Ltd. changed its name to S & I Co., Ltd. and divided MRO division into new Serve-one Co., Ltd.
(*3) This is the amount deducted from the discount on bonds.

17. PROVISIONS:

Changes in provisions for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	Year ended December 31, 2018							
Description	Beginning balance	Effect of accounting policy change	Increase	Using	Reversal	Effect of foreign currency translation	Effect of disposal of subsidiaries	Ending balance
Provision for construction (product) warranties	₩ 19,890	₩ -	₩ 11,256	₩ (11,772)	₩ (1,720)	₩ 49	₩ -	₩ 17,703
Restoration liabilities (*)	6,784	-	993	(3,694)	(608)	2	-	3,477
Others	40,480	2,077	18,067	(20,480)	(3,887)	18	-	36,275
Total	₩ 67,154	₩ 2,077	₩ 30,316	₩ (35,946)	₩ (6,215)	₩ 69	₩ -	₩ 57,455

	Year ended December 31, 2017							
Description	Beginning balance	Increase	Using	Reversal	Effect of foreign currency translation	Assets held for sale	Effect of disposal of subsidiaries	Ending balance
Provision for construction (product) warranties	₩ 17,641	₩ 19,194	₩ (10,931)	₩ (977)	₩ (75)	₩ (1,309)	₩ (3,653)	₩ 19,890
Restoration liabilities (*)	6,826	1,121	(591)	(560)	(12)	-	-	6,784
Others	36,760	19,674	(14,385)	(1,498)	(71)	-	-	40,480
Total	₩ 61,227	₩ 39,989	₩ (25,907)	₩ (3,035)	₩ (158)	₩ (1,309)	₩ (3,653)	₩ 67,154

(*) The increase due to the valuation of the present value is included.

18. RETIREMENT BENEFIT PLAN:

(1) Defined contribution plan

The Group operates a defined contribution plan for its employees. Obligation of the Group is to make payments to third-party funds, and the benefits for employees are determined by the payments made to the funds and the investment earnings from the funds. Plan asset is managed by the third party and is segregated from the Group's assets. Contributions to defined contribution plan during the current period and the previous period are ₩33,575 million and ₩29,734 million, respectively, and payable amounts related to defined contribution plans as of December 31, 2018 and 2017, are ₩5,331 million and ₩3,434 million, respectively.

(2) Defined benefit plan

The Group operates a defined benefit plan for its employees, and according to the plan, employees will be paid his or her average salary of the final three months multiplied by the number of years vested, adjusted for payment rate and other. The actuarial valuation of plan assets and the defined benefit liabilities is performed by a reputable actuary using the projected unit credit method.

1) As of December 31, 2018 and 2017, amounts recognized in the consolidated statements of financial position related to retirement benefit obligation are as follows (Unit: Korean won in millions):

Description	December 31, 2018	December 31, 2017
Present value of defined benefit obligation	₩ 192,693	₩ 209,355
Fair value of plan assets	(182,291)	(196,658)
Net defined benefit liabilities	₩ 10,402	₩ 12,697

2) Changes in defined benefit obligation for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018	Year ended December 31, 2017
Beginning balance	₩ 209,355	₩ 319,853
Current service cost	25,643	38,815
Interest cost	5,362	7,138
Actuarial gain (loss)	10,489	(23,422)
Past service cost	(313)	919
Gain(loss) from reduction/settlement	(15,105)	-
Effect of foreign currency translation	(5)	(15)
Benefits paid	(42,325)	(31,215)
Others	(408)	(1,477)
Classified as liabilities held for sale	-	(1,878)
Changes in the Group	-	(99,363)
Ending balance	₩ 192,693	₩ 209,355

3) Income and loss related to defined benefit plan for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018	Year ended December 31, 2017
Service cost	₩ 25,330	₩ 39,734
Current service cost	25,643	38,815
Past service cost	(313)	919
Effect of settlement/curtailments	-	-
Net interest on the net defined benefit liability (asset)	298	1,308
Interest cost on defined benefit obligation	5,362	7,138
Comprising interest on plan assets	(5,064)	(5,830)
Others	587	430
Total	₩ 26,215	₩ 41,472

Total costs for the years ended December 31, 2018 and 2017, are included in cost of sales for ₩8,238 million and ₩11,274 million, respectively, in selling and administrative expenses for ₩17,977 million and ₩20,693 million, respectively, in profit from discontinued operations for ₩9,505 million during the previous period.

4) Changes in plan assets for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Beginning balance	₩	196,658	₩	262,998
Comprising interest on plan assets		5,064		5,830
Remeasurements – return on plan assets		(1,752)		(1,777)
Contributions from the employer		18,189		29,117
Contributions from the employee		12,200		1,500
Effect of foreign currency translation		-		(1)
Benefits paid		(33,510)		(29,139)
Others		(14,558)		4,340
Classified as liabilities held for sale		-		(625)
Changes in the Group		-		(75,585)
Ending balance	₩	182,291	₩	196,658

5) All of the plan assets are invested in financial instruments that guarantee principal and interest rate as of December 31, 2018 and 2017.

6) Actuarial assumptions used as of December 31, 2018 and 2017, are as follows:

Description	December 31, 2018	December 31, 2017
Discount rate (%)	2.27–7.05	2.60–6.71
Expected rate of salary increase (%)	2.70–9.79	3.51–9.79

7) The sensitivity analysis of the defined benefit obligation as of December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

	December 31, 2018					
Description	Center scenario		+ 1%		- 1%	
Change in discount rate	₩	192,693	₩	180,562	₩	206,147
Change in rate of salary increase		192,693		205,762		180,657

(*) The above sensitivity is estimated based on the assumption that all the other respective assumptions remain unchanged.

	December 31, 2017					
Description	Center scenario		+ 1%		- 1%	
Change in discount rate	₩	209,355	₩	199,109	₩	224,691
Change in rate of salary increase		209,355		224,372		199,154

(*) The above sensitivity is estimated based on the assumption that all the other respective assumptions remain unchanged.

8) Remeasurement related to net defined benefit liabilities for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

Description		Year ended December 31, 2018		Year ended December 31, 2017
Actuarial gains (losses) arising from changes in demographic assumptions	₩	(110)	₩	447
Actuarial gains (losses) arising from changes in financial assumptions		6,899		(26,829)
Actuarial gains (losses) arising from experience		3,667		3,038
Return on plan assets, excluding amounts included in interest income		1,752		1,777
Actuarial gains (losses) arising from transfer in/out adjustments		33		(78)
Total	₩	12,241	₩	(21,645)

Meanwhile, the Group deducted ₩(3,040) million and ₩(4,820) million arising from income tax effect for actuarial gain (loss) during the current and previous periods, respectively.

19. OTHER LIABILITIES:

Other liabilities as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018				December 31, 2017			
	Current		Non-current		Current		Non-current	
Advance receipts	₩	65,403	₩	-	₩	78,491	₩	-
Advances from lease revenue		-		5,218		-		5,551
VAT withheld		68,543		-		63,887		-
Withholdings		73,557		-		54,121		-
Unearned income		4,086		23,927		6,596		17,453
Contract liability (formerly:Overcharged construction)		150,042		-		107,745		-
Other long-term employee benefits		-		10,996		-		10,159
Total	₩	361,631	₩	40,141	₩	310,840	₩	33,163

20. CONSTRUCTION CONTRACTS:

(1) Construction contracts as of December 31, 2018 and 2017 are as follows. (Unit: Korean won in millions):

Description		December 31, 2018		December 31, 2017
Construction contracts	₩	215,376	₩	204,253
Deductions: Allowance for losses		(6,812)		(5,496)
Total	₩	208,564	₩	198,757

Management estimates the allowance for doubtful receivables in accordance with the Practical Uncertainty Law of K-IFRS 1109 as the ECL for the whole period. As of the end of the current period, there are no overdue bonds.

No estimated changes in estimates or assumptions are used in assessing the allowance for contract assets in construction contracts during the year.

(2) Changes in ECLs of contractual assets during the year are as follows (Unit: Korean won in millions):

Description	December 31, 2018
Beginning balance	₩ 5,496
Increase(decrease) of allowance for loss	1,316
Ending balance	₩ 6,812

As of December 31, 2008, the Company has no overdue receivables. Based on past default experience and future prospects for the clients' businesses, management believes that there are no impaired contracts.

(3) Construction liability as of December 31, 2018 and 2017 is as follows. (Unit: Korean won in millions):

Description	December 31, 2018	December 31, 2017
Construction type contract	₩ 150,042	₩ 107,745

No significant change in the contractual liability balance during the reporting period.

(4) Revenue recognized in current operations in respect of the contractual obligations carried forward is as follows, and there is no revenue recognized in the current year in relation to the obligation to fulfill the contract.

Description	December, 2018
S&I Corporation Co., Ltd.	₩ 78,264
LG CNS Co., Ltd	39,420
Consolidation adjustments	(9,939)
Ending balance	₩ 107,745

(5) As of January 1, 2018, the first application date of K-IFRS 1115, changes in estimates of total contractual costs and contractual costs relating to contracts recognized in profit or loss over the period by applying the cost-based input method, The effect of changes in the fair value of derivative financial instruments on profit and loss, contract assets and liabilities in the current and future periods is as follows. (Unit: Korean won in millions):

Description	Change in estimated contract amount	Changes in estimated total contract costs	Effect on current profit or loss	Effect on future profit or loss	Changes in contractual assets (liabilities)
S&I Corporation Co., Ltd.	₩ 317,063	₩ 295,365	₩ 16,349	₩ 5,349	₩ 16,349
LG CNS Co., Ltd.	32,518	35,346	(10,236)	7,408	(10,236)
Consolidation adjustments	3	1,029	(970)	(56)	(951)
Total	₩ 349,584	₩ 331,740	₩ 5,143	₩ 12,701	₩ 5,162

Changes in these estimates are excluded from contracts outstanding at the beginning of the period and include contracts that are in process and ended in prior periods.

(6) None of the contracts that recognize progress-based revenue made by applying the cost-based input method during current period exceeded 5% of previous sales.

21. ISSUED CAPITAL:

Details of issued capital as of December 31, 2018, are as follows (Unit: Korean won in millions):

Type of stock	Number of authorized shares	Number of issued shares	Number of shares owned by related party	Par value (in Korean won)	Amount of issued capital
Common stock	700,000,000	172,557,131	80,329,246	₩ 5,000	₩ 862,786
Preferred stock (*)	-	3,314,677	-	₩ 5,000	₩ 16,573

(*) Preferred stocks are stocks without voting rights that are eligible for an additional 1%, based on the face value of the stock compared to common stocks, when receiving cash dividends. In case of no dividend payout, they are granted voting rights from the date of shareholders' meeting when it is resolved not to pay dividends to the date of shareholders' meeting when it is resolved to pay dividends.

The Group has 93,789 shares of common stock and 6,810 shares of preferred stock as of December 31, 2018 and 2017, respectively; the carrying amounts of common stocks are ₩2,334 million (preferred stock: ₩51 million).

22. CAPITAL SURPLUS:

(1) Composition of capital surplus as of December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

Description	December 31, 2018	December 31, 2017
Asset revaluation reserve	₩ 338,100	₩ 338,100
Paid-up capital in excess of par value	898,266	898,266
Other capital surplus	1,129,179	1,129,183
Total	₩ 2,365,545	₩ 2,365,549

(2) Changes in capital surplus as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	2018	2017
Beginning balance	₩ 2,365,549	₩ 2,364,937
Changes in the share of subsidiaries	(4)	(102)
Acquisition (disposal) in the share of subsidiaries	-	714
Ending balance	₩ 2,365,545	₩ 2,365,549

23. ACCUMULATED OTHER COMPREHENSIVE INCOME:

(1) Details of accumulated other comprehensive income (loss) as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018		December 31, 2017	
Description	₩	(312,898)	₩	(259,160)
Changes in investment valuation using equity method		35,844		41,925
Gain on valuation of other financial assets		(2,064)		(565)
Loss on valuation of other financial assets		(13,232)		(30,663)
Overseas operations translation		59		(1,907)
Loss on valuation of derivatives instruments entered into for cash flow hedge		(127)		-
Total	₩	(292,418)	₩	(250,370)

(2) Changes in investment valuation using equity method for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Beginning balance	₩	(259,160)	₩	(180,415)
Effect of change in accounting policy of affiliated companies		(5,477)		-
Changes in capital of associates and joint ventures		(36,541)		(81,787)
Effect on income taxes		(11,720)		3,042
Ending balance	₩	(312,898)	₩	(259,160)

(3) Changes in gain valuation on other financial assets for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Beginning balance	₩	41,925	₩	21,106
Effect of change in accounting policy		(839)		-
Changes in gain on valuation of other financial assets		(6,915)		27,465
Effect on income taxes		1,673		(6,646)
Ending balance	₩	35,844	₩	41,925

(4) Changes in loss on valuation of other financial assets for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Beginning balance	₩	(565)	₩	(426)
Effect of change in accounting policy		(957)		-
Changes in loss valuation on other financial assets		(1,580)		(183)
Effect on income taxes		1,038		44
Ending balance	₩	(2,064)	₩	(565)

(5) Changes in overseas operations translation for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Beginning balance	₩	(30,663)	₩	2,365
Changes in overseas operations translation		17,431		(33,608)
Changes in scope of consolidation		-		580
Ending balance	₩	(13,232)	₩	(30,663)

(6) Changes in loss on valuation of derivatives instruments entered into for cash flow hedge for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Beginning balance	₩	(1,907)	₩	(2,236)
Net gain (loss) on derivatives instruments entered into for cash flow hedge		1,966		243
Currency forward contract		36		-
Interest rate swap		1,938		321
Income taxes by loss on valuation of derivatives instruments entered into for cash flow hedge		(8)		(78)
Transfers to profit and loss (*)		-		184
Interest rate swap (transferred to non-operating expenses)		-		243
Income tax expenses		-		(59)
Ending balance		59		(1,809)
Changes in scope of consolidation		-		15
Consolidation adjustment		-		(113)
Balance after consolidation adjustment	₩	59	₩	(1,907)

(*) Loss on valuation of cash flow derivatives that are transferred to profit and loss from equity for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Non-operating expenses	₩	-	₩	243
Income tax expenses		-		(59)
Total	₩	-	₩	184

24. RETAINED EARNINGS AND DIVIDENDS:

Changes in retained earnings for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	2018	2017
Beginning balance	₩ 13,010,406	₩ 10,792,060
Effect of change of accounting policy	454,755	-
Beginning balance after adjustment	13,465,161	10,792,060
Profit for the year attributable to the owners of the Company	1,863,880	2,395,905
Dividends (*)	(228,668)	(228,668)
Remeasurement of net defined benefit liability	(9,118)	16,511
Changes in retained earnings by equity method	(42,631)	35,312
Retirements of treasury stocks	-	-
Changes in the Group	-	(714)
Ending balance	₩ 15,048,624	₩ 13,010,406

(*) Details of dividends for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	Year ended December 31, 2018				
Type of stock	Number of issued shares	Number of treasury stocks	Number of dividend shares	Dividend per share (Korean won)	Total dividends (Korean won in millions)
Common stock	172,557,131	93,789	172,463,342	₩ 1,300	₩ 224,202
Preferred stock	3,314,677	6,810	3,307,867	1,350	4,466

	Year ended December 31, 2017				
Type of stock	Number of issued shares	Number of treasury stocks	Number of dividend shares	Dividend per share (Korean won)	Total dividends (Korean won in millions)
Common stock	172,557,131	93,789	172,463,342	₩ 1,300	₩ 224,202
Preferred stock	3,314,677	6,810	3,307,867	1,350	4,466

25. PROFIT (LOSS) FROM OPERATIONS:

Details of profit (loss) from operations for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	Year ended December 31, 2018	Year ended December 31, 2017
Revenue and gain (loss) valuation by equity method		
Sales of goods	₩ 4,902,745	₩ 4,771,625
Sales of finished goods	1,115	121,963
Sales of merchandise	4,901,630	4,649,662
Service revenue	1,965,189	1,940,193
Construction revenue	3,340,368	3,096,587
Gain (loss) on valuation by equity method	1,269,966	1,577,093
Other revenue	466,522	455,560
	11,944,790	11,841,058
Cost of sales		
Cost of sales of goods	4,563,825	4,404,204
Cost of sales of service	1,756,412	1,672,201
Cost of sales of construction	2,949,519	2,932,611
Cost of sales of others	288,072	284,888
	9,557,828	9,293,904
Gross profit	2,386,962	2,547,154
Selling and administrative expenses		
Salaries and wages	199,332	162,677
Retirement benefits	15,477	15,233
Welfare	37,737	35,406
Amusement expenses	5,042	4,928
Depreciation	14,976	12,073
Amortization of intangible assets	12,431	11,174
Taxes and dues	14,725	12,838
Advertising expenses	6,402	5,004
Usual development expenses/survey and research	33,731	16,763
Commission	25,622	20,185
Insurance premium	3,339	2,562
Transportation expenses	11,935	5,693
Travel expenses	7,634	7,766
Service contract expenses	1,122	6,133
Rental expenses	11,310	13,388
Allowance (reversal) of bad debt	8,860	9,666
Allowance (reversal) of accrual of provision	(1,965)	(652)
Others	15,449	20,497
	423,159	361,334
Operating income	₩ 1,963,803	₩ 2,185,820

26. CLASSIFICATION OF EXPENSES BY NATURE:

Details of expenses by nature for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	Year ended December 31, 2018			
Account	Changes in inventories	Selling and administrative expenses	Manufacturing statement	Nature of expenses
Changes in inventories	₩ (5,853)	₩ -	₩ 4,903,951	₩ 4,898,098
Work in process	(74)	-	-	(74)
Merchandise	(5,803)	-	4,568,385	4,562,582
Other inventories	24	-	335,566	335,590
Used raw material	-	-	160,140	160,140
Employee benefits	-	252,546	716,958	969,504
Depreciation and amortization	-	27,407	146,510	173,917
Commission expenses	-	25,622	675,813	701,435
Lease expenses	-	11,310	112,475	123,785
Professional fees	-	1,122	2,438,845	2,439,967
Other expenses and consolidation adjustments	-	105,152	408,989	514,141
Total	₩ (5,853)	₩ 423,159	₩ 9,563,681	₩ 9,980,987

	Year ended December 31, 2017			
Account	Changes in inventories	Selling and administrative expenses	Manufacturing statement	Nature of expenses
Changes in inventories	₩ 87,822	₩ -	₩ 4,468,480	₩ 4,556,302
Merchandise	(22,084)	-	4,309,413	4,287,329
Other inventories	109,906	-	159,067	268,973
Used raw material	-	-	324,226	324,226
Employee benefits	-	213,316	677,368	890,684
Depreciation and amortization	-	23,247	145,070	168,317
Commission expenses	-	20,185	631,104	651,289
Lease expenses	-	13,388	100,765	114,153
Professional fees	-	6,133	2,489,805	2,495,938
Other expenses and consolidation adjustments	-	85,065	369,264	454,329
Total	₩ 87,822	₩ 361,334	₩ 9,206,082	₩ 9,655,238

27. FINANCIAL INCOME AND FINANCIAL EXPENSES:

(1) Financial income for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

Account		Year ended December 31, 2018		Year ended December 31, 2017
Interest income	₩	24,028	₩	18,847
Dividend income		2,278		2,077
Gain on foreign currency transaction		8,120		3,629
Gain on foreign currency translation		1,082		647
Gain on valuation of other financial assets		108		
Financial guarantee fee income		3		-
Total	₩	35,619	₩	25,200

(2) Interest income included in financial income for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

Account		Year ended December 31, 2018		Year ended December 31, 2017
Financial institution deposits and others	₩	21,983	₩	16,661
Other loans and receivables		2,258		2,790
Subtotal		24,241		19,451
Consolidation adjustment		(213)		(604)
Consolidated total	₩	24,028	₩	18,847

(3) Financial expenses for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Account		Year ended December 31, 2018		Year ended December 31, 2017
Interest expenses	₩	43,780	₩	37,779
Loss on foreign currency transaction (non-operating)		3,086		10,449
Loss on foreign currency translation (non-operating)		371		1,995
Loss on transactions of derivatives		-		249
Loss on disposals of other financial assets		1		-
Impairment loss on AFS financial assets		-		316
Loss onvaluation on other financial assets		292		-
Loss on disposals of trade receivables		207		19
Loss on redemption of bonds		1,199		43
Total	₩	48,936	₩	50,850

(4) Interest expenses included in financial expenses for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Account		Year ended December 31, 2018		Year ended December 31, 2017
Bank overdrafts and loan interest	₩	7,137	₩	5,300
Interest expenses (discount on bonds payable)		32,401		22,466
Other interest expenses		5,426		14,017
Less: Capitalized interest expenses included in qualified assets (*)		(903)		(3,223)
Subtotal		44,061		38,560
Consolidation adjustment		(281)		(781)
Consolidated total	₩	43,780	₩	37,779

(*) Capitalization interest rates used for the years ended December 31, 2018 and 2017, are 1.92%–3.20% and 1.92%–3.21%, respectively.

28. OTHER NON-OPERATING INCOME AND EXPENSES:

Other non-operating income and expenses for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description		Year ended December 31, 2018		Year ended December 31, 2017
Other non-operating income				
Rental income	₩	567	₩	370
Commission income		163		216
Gain on foreign currency transaction		14,994		17,908
Gain on foreign currency translation		3,522		7,359
Gain on disposals of tangible assets		1,153		972
Gain on disposals of investment properties		-		938
Gain on disposals of intangible assets		226		22
Gain on transactions of derivatives		7,381		14,414
Gain on valuation of derivatives		1,271		1,719
Gain on disposals of investments in associates		718		186,509
Gain on disposals of investments in subsidiaries		20,543		411,025
Miscellaneous income		3,961		2,123
Other reversal of allowance for doubtful accounts		529		459
Others		497		122
Total	₩	55,525	₩	644,156

Description		Year ended December 31, 2018		Year ended December 31, 2017
Other non-operating expenses				
Loss on foreign currency transaction	₩	18,156	₩	21,975
Loss on foreign currency translation		7,550		15,951
Loss on disposals of tangible assets		448		1,314
Loss on disposals of investment properties		-		348
Loss on disposals of intangible assets		716		783
Loss on transactions of derivatives		13,467		10,542
Loss on valuation of derivatives		5,424		1,836
Loss on disposals of investments in subsidiaries		625		83
Loss on disposals of investments in associates		-		32
Impairment losses of investments in associates		23,680		1169
Donations and contributions		1,378		3,329
Other bad debt expenses		(141)		898
Impairment losses of tangible assets		75		485
Impairment losses of intangible assets		879		201
Miscellaneous loss		2,710		1450
Others		897		2,624
Total	₩	75,864	₩	63,020

29. NET GAINS (LOSSES) FROM FINANCIAL INSTRUMENTS:

Net gains (losses) from financial instruments for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Financial assets:				
Cash and cash equivalents	₩	24,936	₩	16,086
Financial assets at FVTPL		(5,677)		-
Financial assets at FVTOCI		10,958		-
Financial assets measured at amortized cost		(4,216)		-
AFS financial assets		-		32,766
Loans and other receivables (*)		-		(15,202)
Subtotal		26,001		33,650
Financial liabilities:				
Financial liabilities at FVTPL		(13,396)		(12,579)
Derivative liabilities designated as a hedging instrument		-		122
Financial liabilities measured at amortized cost		(48,850)		(32,696)
Subtotal		(62,246)		(45,153)
Total	₩	(36,245)	₩	(11,503)

(*) This line item includes net gains or losses arising from cash and cash equivalents.

30. INCOME TAX:

(1) Composition of income tax expense for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018		Year ended December 31, 2017	
Current income tax	₩	295,961	₩	273,225
Adjustment related to prior income tax expense		(236)		1,067
Changes in deferred tax assets:		(221,854)		63,337
Foreign currency translation effects		54		(145)
Beginning deferred tax assets due to temporary differences		(278,556)		(137,368)
Ending deferred tax assets due to temporary differences		(60,586)		(278,556)
Deferred tax directly reflected in equity		(3,995)		(8,750)
Changes in scope of consolidation		57		(68,785)
Classified as assets held for sale		-		(171)
Effect of change in accounting policy		(22,859)		-
Others and consolidation adjustments		(3,675)		(8,988)
Income tax expense for continuing operations	₩	47,337	₩	328,641

Changes in deferred tax assets (liabilities) for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018 Beginning balance	Reflected in income (loss) or in equity	Changes in scope of consolidation	Classified as assets held for sale	Ending balance
Temporary differences:					
Cash flow hedging	₩ 29	₩ (210)	₩ -	₩ -	₩ (181)
Investments in subsidiaries, associates and joint ventures	(142,138)	81,530	-	-	(60,608)
Property, plant and equipment	25,107	4,505	-	-	29,612
Intangible assets	1,793	(275)	-	-	1,518
Other financial assets	(5,360)	8,963	-	-	3,603
Provisions	31,375	(1,984)	-	-	29,391
Doubtful receivables	1,570	(1,449)	-	-	121
Other financial liabilities	5,206	(2,568)	-	-	2,638
Others	(2,445)	43,697	-	-	41,252
Tax deficit and tax credits:					
Tax deficit	-	143	-	-	143
Others	3,218	(1,962)	57	-	1,313
Deferred tax assets (liabilities)	(81,645)	130,390	57	-	48,802
Consolidation adjustment	(196,911)	87,523	-	-	(109,388)
Consolidated balance	₩ (278,556)	₩ 217,913	₩ 57	₩ -	₩ (60,586)

Description	December 31, 2017 Beginning balance	Reflected in income (loss) or in equity	Changes in scope of consolidation.	Classified as assets held for sale	Ending balance
Temporary differences:					
Cash flow hedging	₩ 600	₩ (571)	₩ -	₩ -	₩ 29
Investments in subsidiaries, associates and joint ventures	(168,155)	26,017	-	-	(142,138)
Property, plant and equipment	23,183	5,736	(2,608)	(1,204)	25,107
Intangible assets	5,480	(3,687)	-	-	1,793
AFS financial assets	(87)	(5,053)	(220)	-	(5,360)
Provisions	42,530	(6,576)	(4,015)	(564)	31,375
Doubtful receivables	1,092	1,409	(380)	(551)	1,570
Other financial liabilities	3,060	2,962	-	(816)	5,206
Others	12,930	(6,553)	(8,822)	-	(2,445)
Tax deficit and tax credits:					
Tax deficit	63,927	(15,004)	(48,923)	-	-
Others	20,986	(12,963)	(3,548)	(1,257)	3,218
Deferred tax assets (liabilities)	5,546	(14,283)	(68,516)	(4,392)	(81,645)
Consolidation adjustment	(142,914)	(57,949)	(269)	4,221	(196,911)
Consolidated balance	₩ (137,368)	₩ (72,232)	₩ (68,785)	₩ (171)	₩ (278,556)

(2) Details of income tax that are directly reflected to the capital for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018		December 31, 2017	
Valuation gain (loss) of derivatives for cash flow hedge	₩	(9)	₩	(137)
Valuation gain (loss) of AFS financial assets		4,695		(6,598)
Remeasurement of defined benefit plans		3,039		(5,057)
Change of capital from equity method		(11,720)		3,042
Total	₩	(3,995)	₩	(8,750)

(3) As of December 31, 2018 and 2017, unrecognized deferred tax assets, excluding investment assets, are as follows (Unit: Korean won in millions):

Description	December 31, 2018		December 31, 2017	
Temporary differences	₩	9,840	₩	13,303
Tax deficit		52,099		51,834
Tax credits unused		-		185

(4) As of December 31, 2018 and 2017, the temporary differences related to investment assets and equity interest not recognized as deferred tax assets (liabilities) are as follows (Unit: Korean won in millions):

Description	December 31, 2018		December 31, 2017	
Investments in subsidiaries	₩	(1,443,094)	₩	(1,535,126)
Investments in associates and joint ventures		1,379,639		1,331,788
Total	₩	(63,455)	₩	(203,338)

31. EARNINGS PER SHARE:

(1) Net income per share for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won):

Description	December 31, 2018		December 31, 2017	
Basic earnings per share of common share				
Continuing operation	₩	10,603	₩	13,603
Discontinued operation		-		27
Total basic earnings per share of common share	₩	10,603	₩	13,630
Basic earnings per share of Pre-1996 Commercial Law Amendment preferred share (*)				
Continuing operation	₩	10,653	₩	13,653
Discontinued operation		-		27
Total basic earnings per share of Pre-1996 Commercial Law Amendment preferred share	₩	10,653	₩	13,680

(*) Basic earnings per share are calculated for preferred share, which K-IFRS 1033, *Earnings per Share,* clarifies as common share, such as having no priority rights for dividend of profit and distribution of residual property.

(2) Net income and weighted-average number of shares used to calculate earnings per share of common share for the years ended December 31, 2018 and 2017, are as follows
(Unit: Korean won in millions):

Description	Year ended December 31, 2018	Year ended December 31, 2017
Profit for the year attributable to owners of the Company	₩ 1,863,881	₩ 2,395,905
Less dividends for Pre-1996 Commercial Law Amendment preferred share	(4,466)	(4,466)
Less Pre-1996 Commercial Law Amendment preferred stock portion of residual profit	(30,773)	(40,785)
Net income used to calculate basic earnings per share of common share	1,828,642	2,350,654
Less discontinued operations' profit used for discontinued operations' basic earnings per share of common share	58	4,690
Profit from continuing operations used for continuing operations' basic earnings per share of common share	1,828,584	2,345,964
Weighted-average number of common shares	172,463,342 shares	172,463,342 shares

(3) Net income and weighted-average number of shares used to calculate earnings per share of Pre-1996 Commercial Law Amendment preferred share for the years ended December 31, 2018 and 2017, are as follows
(Unit: Korean won in millions):

Description	Year ended December 31, 2018	Year ended December 31, 2017
Dividends for Pre-1996 Commercial Law Amendment preferred share and Pre-1996 Commercial Law Amendment preferred stock portion of residual profit	₩ 35,239	₩ 45,251
Net income used to calculate basic earnings per share of Pre-1996 Commercial Law Amendment preferred share	35,239	45,251
Less discontinued operations' profit used for discontinued operations' Pre-1996 Commercial Law Amendment preferred earnings per share of preferred share	1	90
Profit from continuing operations used for continuing operations' Pre-1996 Commercial Law Amendment preferred earnings per share of preferred share	35,238	45,161
Weighted-average number of Pre-1996 Commercial Law Amendment preferred shares	3,307,867 shares	3,307,867 shares

(4) As there are no potential common shares of the Group, diluted earnings per share of common shares and Pre-1996 Commercial Law Amendment preferred shares are equal to basic earnings per share.

32. RELATED-PARTY TRANSACTIONS:

(1) Details of related parties as of December 31, 2018 and 2017, are as follows:

December 31, 2018		
Entities with direct ownership	Subsidiaries of entities with direct ownership (domestic) (*1)	Subsidiaries of entities with direct ownership (overseas) (*1)
Associates:		
Korea Smart Card Co., Ltd.	Korea Smart Card CS Partners Co., Ltd.	T-Money America, Inc. and others
	High End Co., Ltd.	
Songdo U-Life LLC	U-Life Solutions	
	Songdo International Sports Club LLC	
Recaudo Bogota S.A.S.		
Dongnam Solar Energy Co., Ltd.		
Combustion Synthesis Co., Ltd.		
Hellas SmarTicket Societe Anonyme		
Ulleungdo Natural Energy Independent Island Co., Ltd.		
Daegu Clean Energy Co., Ltd.		
KEPCO-LGCNS Mangilao Holdings LLC		KEPCO-LGCNS Mangilao Investment LLC and others
LG Electronics Inc.	Hi Plaza Inc.	LG Electronics Mexico S.A. DE C.V. and others
	Hi-M Solutec Co., Ltd.	
	HITeleservice Co., Ltd.	
	New Growth Venture Fund	
	New Growth Venture Fund Ⅱ	
	Ace R&A Co., Ltd.	
	Hientech Co., Ltd.	
	LG-Hitachi Water Solutions Co., Ltd.	
	LG Innotek Co., Ltd.	
	Innowith	
	Hanuri	
	LG Innotek Alliance Fund	
LG Chem Ltd.	Haengboknuri	LG Chem America, Inc. and others
	FarmHannong Co., Ltd.	
	FarmHwaong Co., Ltd.	
	Ujimak Korea Co., Ltd. (*2)	
LG Hausys, Ltd.	Greennuri, Ltd. (*3)	LG Hausys America, Inc. and others
LG Uplus Corp.	CS Leader	DACOM America Inc.
	Ain Teleservice	
	CS One Partner	
	Medialog Corp.	
	With U Co., Ltd.	
LG Household & Health Care Ltd.	Coca-Cola Beverage Co.	Beijing LG Household Chemical Co., Ltd. and others
	Hankook Beverage Co., Ltd.	
	The FaceShop Co., Ltd.	
	HAITAI HTB CO., LTD.	
	CNP Cosmetics Co., Ltd.	
	K&I Co., Ltd.	
	Balkeunnuri Co., Ltd.	
	Fmji Co., Ltd. (*4)	
	Oriental Biomed Lab Ltd.	
	LG Farouk Co.	
	Ulleung Mountain Chu Spring Water Development Company	
	JS Pharmaceutical Co., Ltd. (*2)	
	Taegeuk Pharmaceutical Co., Ltd. (*2)	
LG International Corp. (*2)	Dangjin Tank Terminal Co., Ltd.	LG International (America) Inc. and others
	Pantos Logistics Co., Ltd.	PANTOS LOGISTICS (CHINA) CO., LTD. and others
	Pantos Busan Newport Logistics Center Co., Ltd.	
	Helistar Air Co., Ltd.	
	Hanultari Co., Ltd. (*3)	
GIIR Corporation	HS Ad Co., Ltd.	GIIR America Inc. and others
	L. Best	
LG Hitachi Co., Ltd.		
Silicon Works Co., Ltd.		Silicon Works Inc.
LG Fuel Cell Systems Inc.	LG Fuel Cell Systems (Korea) Inc.	

December 31, 2018		
Entities with direct ownership	Subsidiaries of entities with direct ownership (domestic) (*1)	Subsidiaries of entities with direct ownership (overseas) (*1)
ZKW Holding GmbH (*5)		ZKW Group GmbH and others
MGIV GmbH (*5)		Mommert Immobilien GmbH
Joint ventures:		
LG MMA Corp.		
Other related parties' affiliates by the Act: (*6)		
LG Display Co., Ltd.	Nanumnuri Co., Ltd.	LG Display Nanjing Co., Ltd. and others
LG Tostem BM Co., Ltd.		
SEETEC Co., Ltd.		
MiGenstory Co., Ltd.		
Clean Soul Ltd.		
DACOM Crossing Corporation		
Robostar Co., Ltd. (*2)	Robomedi Co., Ltd. (*2)	

(*1) Joint ventures of associates are excluded.
(*2) Acquired and classified as investments in associates during current period.
(*3) During the year, related companies were newly established and classified as related parties.
(*4) Changed the name of the company during the year (Zenith Co., Ltd.).
(*5) The Company has been classified as a related party due to the acquisition of equity interest of the Group during the current year ended December 31, 2018.
(*6) These companies are not related parties defined in paragraph 9 of K-IFRS 1024. However, the companies are designated by the Fair Trade Commission as related parties in accordance with the resolution of the Securities and Futures Commission in accordance with the substantive relationship stipulated in paragraph 10 of K-IFRS 1024.

December 31, 2017		
Entities with direct ownership	Subsidiaries of entities with direct ownership (domestic) (*1)	Subsidiaries of entities with direct ownership (overseas) (*1)
Associates:		
Korea Smart Card Co., Ltd.	Korea Smart Card CS Partners Co., Ltd.	T-Money America, Inc. and others
	High End Co., Ltd.	
Songdo U-Life LLC	U-Life Solutions	
	Songdo International Sports Club LLC	
Recaudo Bogota S.A.S.		
Dongnam Solar Energy Co., Ltd.		
Combustion Synthesis Co., Ltd.		
Hellas SmarTicket Societe Anonyme		
Sejong Green Power Co., Ltd. (*2)		
Ulleungdo Natural Energy Independent Island Co., Ltd.		
Daegu Clean Energy Co., Ltd.		
LG Electronics Inc.	Hi Plaza Inc.	LG Electronics Mexico S.A. DE C.V. and others
	Hi-M Solutec Co., Ltd.	
	HITeleservice Co., Ltd.	
	New Growth Venture Fund	
	New Growth Venture Fund Ⅱ	
	Ace R&A Co., Ltd.	
	Hientech Co., Ltd.	
	LG-Hitachi Water Solutions Co., Ltd.	
	LG Innotek Co., Ltd.	
	Innowith	
	Hanuri	
	LG Innotek Alliance Fund	
LG Chem Ltd.	Haengboknuri	LG Chem America, Inc. and others
	FarmHannong Co., Ltd.	
	Agrotech Co., Ltd.	
	FarmBiotec Co., Ltd.	
	FarmHwaong Co., Ltd. (*3)	
	Sesil Corp.	
LG Hausys, Ltd.	LG Hausys ENG., Ltd.	LG Hausys America, Inc. and others
LG Uplus Corp.	CS Leader	DACOM America Inc.
	Ain Teleservice	
	CS One Partner	

December 31, 2017		
Entities with direct ownership	Subsidiaries of entities with direct ownership (domestic) (*1)	Subsidiaries of entities with direct ownership (overseas) (*1)
	Medialog Corp.	
	With U Co., Ltd.	
LG Household & Health Care Ltd.	Coca-Cola Beverage Co.	Beijing LG Household Chemical Co., Ltd. and others
	Hankook Beverage Co., Ltd.	
	The FaceShop Co., Ltd.	
	HAITAI HTB CO., LTD.	
	CNP Cosmetics Co., Ltd.	
	K&I Co., Ltd.	
	Balkeunnuri Co., Ltd.	
	Zenisce Co., Ltd.	
	Oriental Biomed Lab Ltd.	
	LG Farouk Co.	
LG International Corp Co., Ltd. (*4)	Dangjin Tank Terminal Co., Ltd.	LG International (America) Inc. and others
	Pantos Logistics Co., Ltd.	PANTOS LOGISTICS (CHINA) CO., LTD. and others
	Pantos Busan Newport Logistics Center Co., Ltd.	
	Helistar Air Co., Ltd.	
GIIR Corporation	HS Ad Co., Ltd.	GIIR America Inc. and others
	L. Best	
LG Hitachi Co., Ltd.		
Silicon Works Co., Ltd.		Silicon Works Inc.
LG Fuel Cell Systems Inc.	LG Fuel Cell Systems (Korea) Inc.	
Joint ventures:		
LG MMA Corp.		
Serveone Cenyar Services Co.		
Other related parties' affiliates by the Act: (*5)		
LG Display Co., Ltd.	Nanumnuri Co., Ltd.	LG Display Nanjing Co., Ltd. and others
Global Dynasty Overseas		
Saldevida Korea Co.		
LG Tostem BM Co., Ltd.		
SEETEC Co., Ltd.		
Genstory Co., Ltd.		
Clean Soul Ltd.		
DACOM Crossing Corporation		
JIHEUNG Co., Ltd.		

(*1) Joint ventures of associates are excluded.
(*2) It was classified as subsidiary.
(*3) Due to liquidation during the current period, they were excluded from associates.
(*4) It was classified as associates due to the acquisition of equity interest in the prior year.
(*5) These companies are not related parties defined in paragraph 9 of K-IFRS 1024. However, the companies are designated by the Fair Trade Commission as related parties in accordance with the resolution of the Securities and Futures Commission in accordance with the substantive relationship stipulated in paragraph 10 of K-IFRS 1024.

(2) Transactions within the Group and subsidiaries are eliminated before consolidation, and the details of other transactions with related parties as of December 31, 2018 and 2017, are as follows:

1) Transactions with related parties for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	Year ended December 31, 2018			
Description	Revenue and others (*1)	Purchase of raw material	Acquisitions of property, plant and equipment	Other purchase
Associates and their subsidiaries:				
Korea Smart Card Co., Ltd. (*2)	₩ 26,571	₩ -	₩ -	₩ 3,211
LG Chem Ltd. (*2)	1,946,272	18,862	857	61,293
LG Household & Health Care Ltd. (*2)	325,565	1,317	-	4,512
LG Electronics Inc. (*2)	2,549,716	63,126	2,229	147,288
LG Uplus Corp. (*2)	525,271	7	8	32,755
LG Life Science Co., Ltd. (*2)(*3)	-	-	-	-
LG Hitachi Co., Ltd.	285	-	-	1,074
GIIR Corporation (*2)	10,335	-	892	21,180
LG Hausys, Ltd. (*2)	146,236	3,392	945	34,279
Silicon Works Co., Ltd. (*2)	24,202	19	-	133
Dongnam Solar Energy Co., Ltd.	395	-	-	-
Sejong Green Power Co., Ltd.	4,705	-	-	-
LG Fuel Cell Systems Inc. (*2)	141	-	-	-
Ulleungdo Natural Energy Independent Island Co., Ltd. (*2)	2,804	-	-	-
LG International Corp. (*2)(*5)	112,518	5,035	-	2,017
Joint ventures:				
LG MMA Corp.	96,142	199	-	-
Other related parties' affiliates by the Act: (*2)(*7)				
LG Display Co., Ltd. and others	2,273,437	-	-	388
Total	₩ 8,044,595	₩ 91,957	₩ 4,931	₩ 308,130

Description	Year ended December 31, 2017 Revenue and others (*1)	Purchase of raw material	Acquisitions of property, plant and equipment	Other purchase
Associates and their subsidiaries:				
Korea Smart Card Co., Ltd. (*2)	₩ 22,197	₩ -	₩ -	₩ 1,097
LG Chem Ltd. (*2)	1,568,664	29,666	-	16,157
LG Household & Health Care Ltd. (*2)	380,013	2,177	509	10,916
LG Electronics Inc. (*2)	2,530,131	145,551	310,363	188,277
LG Uplus Corp. (*2)	438,993	7	584	78,538
LG Life Science Co., Ltd. (*2)(*3)	-	-	-	-
LG Hitachi Co., Ltd.	1,023	-	-	757
GIIR Corporation (*2)	12,448	42	339	27,895
LG Hausys, Ltd. (*2)	160,704	17,729	-	79,753
Silicon Works Co., Ltd. (*2)	109,426	20	-	421
Recaudo Bogota S.A.S.	-	-	-	-
Petro Conergy Co., Ltd. (*4)	-	-	-	-
Songdo U-Life LLC (*2)	-	-	-	-
Dongnam Solar Energy Co., Ltd.	346	-	-	-
Sejong Green Power Co., Ltd.	5,722	-	-	-
LG Fuel Cell Systems Inc. (*2)	1,144	-	-	-
Ulleungdo Natural Energy Independent Island Co., Ltd. (*2)	357	-	-	-
LG International Corp. (*2)(*5)	68,193	3,797	2,130	12,075
Joint ventures:				
LG MMA Corp.	43,835	26	-	-
Other related parties' affiliates by the Act: (*2)(*6)				
LG Display Co., Ltd. and others	2,226,151	21	-	1,048
Total	₩ 7,569,347	₩ 199,036	₩ 313,925	₩ 416,934

(*1) Dividends received from associates are disclosed in Note 13.
(*2) Includes transactions with an associate's subsidiary.
(*3) Acquired and classified as investments in associates during previous period.
(*4) The amount is the amount of the subsidiary that became a subsidiary of LG CNS for the period due to the stock purchase agreement.
(*5) The Company recorded contractual assets of ₩44,292 million and contractual liabilities of ₩77,000 million for LG Electronics Co., Ltd. and others, and ₩131,286 million and contractual liabilities of ₩107,163 million for LG Electronics Co., Ltd. and others.
(*6) These companies are not related parties defined in paragraph 9 of K-IFRS 1024. However, the companies are designated by the Fair Trade Commission as related parties in accordance with the resolution of the Securities and Futures Commission in accordance with the substantive relationship stipulated in paragraph 10 of K-IFRS 1024.

2) Outstanding receivables and payables from transactions with related parties as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	December 31, 2018			
	Account receivables and others (*1)	Loans	Account payables and others (*2)	Borrowings
Associates and their subsidiaries:				
Korea Smart Card Co., Ltd. (*3)	₩ 4,890	₩ -	₩ 543	₩ -
LG Chem Ltd. (*3)	647,881	-	60,263	-
LG Household & Health Care Ltd. (*3)	36,913	-	18,815	-
LG Electronics Inc. (*3)	662,817	-	157,312	-
LG Uplus Corp. (*3)	195,538	-	29,500	-
LG Hitachi Co., Ltd.	56	-	522	-
GIIR Corporation (*3)	9,264	-	20,336	-
LG Hausys, Ltd. (*3)	28,816	-	14,218	-
Recaudo Bogota S.A.S.	17,688	-	-	-
Dongnam Solar Energy Co., Ltd.	105	175	-	-
Ulleungdo Natural Energy Independent Island Co., Ltd.	-	-	-	-
KEPCO-LGCNS Mangilao Holdings LLC	-	7,594	-	-
Silicon Works Co., Ltd. (*3)	910	-	304	-
LG Fuel Cell Systems Inc. (*3)	12	-	-	-
LG International Corp. (*3)(*4)	11,075	-	18,184	-
Joint ventures:				-
LG MMA Corp.	30,670	-	1,111	-
Other related parties' affiliates by the Act: (*3)(*5)				
LG Display Co., Ltd. and others	606,238	-	38,071	-
Total	₩ 2,252,873	₩ 7,769	₩ 359,179	₩ -

Description	December 31, 2017 Account receivables and others (*1)	Loans	Account payables and others (*2)	Borrowings
Associates and their subsidiaries:				
Korea Smart Card Co., Ltd. (*3)	₩ 2,047	₩ -	₩ 165	₩ -
LG Chem Ltd. (*3)	578,620	-	65,106	-
LG Household & Health Care Ltd. (*3)	85,087	-	19,776	-
LG Electronics Inc. (*3)	703,139	-	259,127	-
LG Uplus Corp. (*3)	137,850	-	54,005	-
LG Hitachi Co., Ltd.	213	-	693	-
GIIR Corporation (*3)	8,056	-	18,572	-
LG Hausys, Ltd. (*3)	49,793	-	42,284	-
Recaudo Bogota S.A.S.	17,110	-	-	-
Dongnam Solar Energy Co., Ltd.	107	175	-	-
Ulleungdo Natural Energy Independent Island Co., Ltd.	84	-	-	-
KEPCO-LGCNS Mangilao Holdings LLC	-	7,277	-	-
Silicon Works Co., Ltd. (*3)	20,465	-	406	-
LG Fuel Cell Systems Inc. (*3)	133	-	-	-
LG International Corp. (*3)(*4)	30,223	-	14,322	-
Joint ventures:				-
LG MMA Corp.	15,857	-	1,066	-
Other related parties' affiliates by the Act: (*3)(*5)				
LG Display Co., Ltd. and others	764,088	-	31,661	-
Total	₩ 2,418,309	₩ 7,452	₩ 507,183	₩ -

(*1) Receivables from related parties are composed of trade receivables, other receivables and prepaid expenses arising from transactions. Also includes dividends receivables with related parties.

(*2) Payables to related parties are composed of trade payables and other payables arising from transactions with related parties.

(*3) Includes transactions with an associate's subsidiary.

(*4) Acquired and classified as investments in associates during the previous period.

(*5) These companies are not related parties defined in paragraph 9 of K-IFRS 1024. However, the companies are designated by the Fair Trade Commission as related parties in accordance with the resolution of the Securities and Futures Commission in accordance with the substantive relationship stipulated in paragraph 10 of K-IFRS 1024.

3) Fund transactions with the related parties for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018 Payment in cash (reduction of capital)	Sale of interests	Loans Loans	Payback	Borrowings Borrowings	Repayments
Associates:						
LG Fuel Cell Systems Inc.	₩ 4,530	₩ -	₩ -	₩ -	₩ -	₩ -
Total	₩ 4,530	₩ -	₩ -	₩ -	₩ -	₩ -

Description	Year ended December 31, 2017 Payment in cash (reduction of capital)	Sale of interests	Loans Loans	Payback	Borrowings Borrowings	Repayments
Associates:						
Combustion Synthesis Co., Ltd.	₩ 537	₩ -	₩ -	₩ -	₩ -	₩ -
LG Fuel Cell Systems Inc.	21,921	-	-	29,189	-	-
Dongnam Solar Energy Co., Ltd.	-	-	436	261	-	-
KEPCO-LGCNS Mangilao Holdings LLC	-	-	7,610	-	-	-
Others:						
Related party, etc.	-	296,711	-	-	-	-
Total	₩ 22,458	₩ 296,711	₩ 8,046	₩ 29,450	₩ -	₩ -

(3) The compensation and benefits for the Group's key managements (registered executives, including non-permanent and non-registered executives) who have significant control and responsibility on planning, operating and controlling the activities of the Group for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Year ended December 31, 2018	Year ended December 31, 2017
Short-term employee benefits	₩ 62,510	₩ 71,015
Severance benefits	10,148	11,608
Other long-term employee benefits	4	5
Total	₩ 72,662	₩ 82,628

(4) Details of payment guarantees provided to related parties as of December 31, 2010 are as follows (Unit: EUR and Korean won in millions):

Company provided	Details	Insurance company	Limit amount	Limit amount (Korean won)	Warranty
Hellas SmarTicket Societe Anonyme	Payment guarantees	The Export-Import Bank of Korea	EUR 28,000,000	35,816	2016.03.04 - 2027.03.04

(5) Other commitments

In connection with the power sales business of Sejong Green Power Co., Ltd., the Company has entered into a contract to compensate for the operating loss of Sejong Green Power Co. In addition, under the management contract, the management operator, LG CNS Co., Ltd., is obliged to purchase the shares of Sejong Green Power Co., Ltd. held by the financial investor if the number of years in which the annual operating period exceeds 30 days is two consecutive years.

Affiliated company, S&I Corporation, in conjunction with Kwang Myung Electric Co., Ltd. and Daekyung Enertec Co., Ltd., annually develops related to the debt of Nonghyup Bank Co., Ltd. (13.2 billion) of Southeast Photovoltaic Co. We have entered into a contract to deliver the shortfall to the sales guarantee account.

31. FUNDING ARRANGEMENTS AND PLEDGING:

(1) As of December 31, 2018, commitments related to the Group's funding are as follows (Unit: Korean won in millions):

Category	Limit	Used
Import	60,595	1,152
Overdraft	34,000	7,303
Credit line	35,000	62
Corporate facility fund borrowings	343,117	102,741
Working capital borrowings	248,945	123,682
Forwards	100,182	25,501
Receivable-backed borrowings	437,000	84,084
Other borrowing agreements	86,600	11,127
Others	48,190	3,290

(2) Restricted financial assets as of December 31, 2018, are as follows (Unit: Korean won in millions):

Account	December 31, 2018	Remark
Cash and cash equivalents	₩ 5,792	Deposits for issuing notes and pledges against borrowings
Financial institution deposits	13,000	Win-Win Cooperation Fund and L/C agreements
Long-term deposits	32	Deposits for overdraft accounts

(3) Details of pledging as of December 31, 2018, are as follows:

Provider	Recipient	Details
LG Corp.	Woori Bank and one other	Collateral for rent deposit (blank bill and two notes).
Serveone Co., Ltd.	LG Electronics Inc. and two others	Six mortgage notes (face value: ₩4,125 million) pledged to guarantee performance and warranty.
	The Korea Development Bank and 21 others	Stock collateral security pledged, ₩3,832 million with respect to BTL (Build Transfer Lease) projects.
	Shinhan Bank	
	Woori Bank	
	Shinhan Bank	
	NH Bank	₩873 million of associate stock provided as pledged to PF (Project Financing).
	Construction Guarantee	₩766 million of capital stock investment provided a combination as mortgage.
	Electric Contractors Financial Cooperative	₩65 million of capital stock investment provided a combination as mortgage.
	Engineering Guarantee Insurance	₩64 million of capital stock investment provided a combination as mortgage.
	Korea Specialty Contractor Financial Cooperative	₩77 million of capital stock investment provided a combination as mortgage.
	Information & Communication Financial Cooperative	₩22 million of capital stock investment provided a combination as mortgage.
	Korea Facilities Construction Financial Cooperative	₩52 million of capital stock investment provided a combination as mortgage.
LG Holdings Japan	SMBC	Provide Tokyo KTT Tower land and buildings as collateral (book value: ₩19,328 million).
LG Corp.U.S.A.	SC Bank	
LG CNS Co., Ltd.	Korea Software Financial Cooperative	₩1,300 million of capital stock investment provided a combination as mortgage.
	Engineering Guarantee Insurance	₩779 million of capital stock investment provided a combination as mortgage.
Korea Elecom Co., Ltd.	Shinhan Bank	Provide land and buildings as collateral (book value: ₩2,887 million and amount limit: ₩4,500 million).
	SSangyong Information & Communications Corp.	Receivables of patent rights are provided as collateral (amount: ₩6,500 million).
	Shinhan Bank	
LG Sports Co., Ltd.	Kookmin Bank	Provide land as collateral (book value: ₩98,360 million and amount limit: ₩48,000 million).

(4) Performance guarantee

The Group provides the following performance guarantees and warranties to customers through third-party guarantee insurance agreements as of December 31, 2018 (Unit: Korean won in millions):

Description	Provider	Amounts of guarantees		Insurance company
Guarantee of contract and warranties, etc.	LG CNS Co., Ltd., S&I Corporation Co., Ltd. and others	₩	152,478	Seoul Guarantee Insurance
			286,387	Korea Software Financial Cooperative
			7,546	Engineering Financial Cooperative
			14,164	The Export-Import Bank of Korea
			143,427	KEB Hana Bank and others
Total		₩	604,002	

32. OPERATING LEASE CONTRACTS:

(1) The Group as lessee

1) The Group entered into operating lease contracts for buildings, vehicles and office equipment. Payment schedule related to the major operating lease contracts as of December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

	December 31, 2018							
Company	Less than 1 year		1 year–5 years		More than 5 years		Total	
LG Corp. and 27 others	₩	22,753	₩	9,123	₩	6	₩	31,882

	December 31, 2017							
Company	Less than 1 year		1 year–5 years		More than 5 years		Total	
LG Corp. and 32 others	₩	27,490	₩	9,620	₩	31	₩	37,141

2) The Group recognized rental expense related to operating lease contracts for the years ended December 31, 2018 and 2017, for the amounts of ₩123,954 million and ₩116,974 million, respectively. For the years ended December 31, 2018 and 2017, ₩169 million and ₩2,821 million, respectively, were included as account of profit or loss from discontinued operations.

(2) The Group as lessor

1) LG CNS Corp. has a telecommunications equipment lease contract with LG Uplus Corp. Other entities within the Group also have certain real estate operating lease contracts.

2) The operating lease contracts as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	December 31, 2018							
Company	Less than 1 year		1 year–5 years		More than 5 years		Total	
LG Corp. and 6 others	₩	117,866	₩	55,428	₩	56,267	₩	229,561

	December 31, 2017							
Company	Less than 1 year		1 year–5 years		More than 5 years		Total	
LG Corp. and 6 others	₩	62,965	₩	57,852	₩	61,741	₩	182,558

3) The Group recognized rental profit related to operating lease contracts for the years ended December 31, 2018 and 2017, in the amounts of ₩127,584 million and ₩119,145 million, respectively. For the years ended December 31, 2018 and 2017, ₩107 million and ₩842 million, respectively, were included as account of profit or loss from discontinued operations.

33. PENDING LITIGATIONS:

1) Pending litigations as of December 31, 2018, are claims for return of other receivables (defendant: Asan Social Welfare Foundation and the amount of lawsuit: ₩10,000 million) and 12 others, and the total amount of lawsuits is ₩27,218 million. The cases that the Group is sued are the claims for software copyright infringement (plaintiff: KB Bank and the amount of lawsuit: ₩48,903 million) and 19 others, and the total amount of lawsuits is ₩209,253 million. Meanwhile, the results of lawsuits and the effects on the consolidated financial statements cannot be reasonably predicted at the end of the reporting date.

2) During the year ended December 31, 2018, a fire occurred in a building entrusted by Serveone Co., Ltd., a subsidiary, and the Group believes that it is liable to indemnify some of the losses caused by the fire accident. The Group sets the related provision as the best estimate as of December 31, 2018.

34. RISK MANAGEMENT:

(1) Capital risk management

The Group performs capital risk management to maintain the ability to continuously provide profits to shareholders and interested parties and to maintain optimum capital structure to reduce capital expenses. In order to maintain such optimum structure, the Group may adjust dividend payments, redeem paid-up capital to shareholders, issue stocks to reduce liability or sell assets.

The Group's capital structure consists of net liability, which is borrowings, less cash and cash equivalents and equity; the overall capital risk management policy of the Group is unchanged from the prior period. In addition, items managed as capital by the Group as of December 31, 2018 and 2017, are as follows
(Unit: Korean won in millions):

	December 31, 2018		December 31, 2017	
Total borrowings	₩	1,519,537	₩	1,392,657
Less: Cash and cash equivalents		(1,054,293)		(1,309,949)
Borrowings, net		465,244		82,708
Total equity	₩	18,164,478	₩	16,179,511
Debt-to-equity ratio		2.56%		0.51%

(2) Financial risk management

The Group is exposed to various financial risks, such as market risk (foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk related to financial instruments. The purpose of risk management of the Group is to identify potential risks of financial performance and reduce, eliminate and evade those risks to a degree acceptable to the Group. The Group makes use of derivative financial instruments to hedge certain risks, such as foreign exchange and interest rate risks. Overall financial risk management policy of the Group is the same as one of the prior period.

1) Foreign currency risk

The Group is exposed to foreign currency risk since it makes transactions in foreign currencies. The book value of Group's monetary assets and liabilities denominated in foreign currency that is not the functional currency as of December 31, 2018, is as follows (Unit: Korean won in millions):

Currency	Assets		Liabilities	
USD	₩	295,991	₩	115,077
EUR		90,695		21,188
JPY		2,600		621
CNY		18,007		509
Others		73,422		899
Total	₩	480,715	₩	138,294

The Group internally assesses the foreign currency risk from changes in exchanges rates on a regular basis. The Group's sensitivity analysis to a 10% increase and decrease in the Korean won (functional currency of the Group) against major foreign currencies as of December 31, 2018, is as follows (Unit: Korean won in millions):

Currency	10% increase against foreign currency	10% decrease against foreign currency
USD	₩ 13,759	₩ (13,759)
EUR	5,485	(5,485)
JPY	150	(150)
CNY	1,326	(1,326)
Others	5,490	(5,490)
Total	₩ 26,210	₩ (26,210)

Sensitivity analysis above is conducted for monetary assets and liabilities denominated in foreign currencies other than the functional currency as of December 31, 2018.

As of December 31, 2018, the Group entered into cross-currency forward contracts and currency swap contracts to manage its foreign currency exchange rate risk related to its expected sale and purchase. The evaluation of unsettled currency forward contracts and currency swap contracts as of and for the year ended December 31, 2018, is as follows (Unit: Korean won in millions):

Description	Notional amount	Valuation gain and loss		Accumulated other comprehensive income	Fair value	
		Gain	Loss		Assets	Liabilities
Currency forward	₩ 177,353	₩ 1,271	₩ 181	₩ -	₩ 1,241	₩ 181

2) Interest rate risk

The Group borrows on a floating rate and is exposed to cash flow risk arising from interest rate changes. Also, because of AFS debt securities that are measured at fair value, the Group is exposed to fair value interest rate risk.

The book value of assets and liabilities exposed to interest rate risk as of December 31, 2018, is as follows (Unit: Korean won in millions):

Description	December 31, 2018
Borrowings	₩ 131,449
Total	₩ 131,449

The Group internally assesses the cash flow risk from changes in interest rates on a regular basis.

Effect of changes in interest rates of 1% to net income as of December 31, 2018, is as follows (Unit: Korean won in millions):

Description	1% increase		1% decrease	
	Gain (loss)	Net assets	Gain (loss)	Net assets
Borrowings	₩ (898)	₩ -	₩ 898	₩ -
Total	₩ (898)	₩ -	₩ 898	₩ -

3) Price risk

The Group is exposed to price risks from AFS equity instruments. As of December 31, 2018, the fair value of AFS equity instruments is ₩35,755 million, and when all the other variables are constant and when the price of equity instrument changes by 10%, the effect of after tax to equity will be ₩2,710 million.

4) Credit risk

Credit risk refers to risk of financial losses to the Group when the counterparty defaults on the obligations of the contract.
The maximum amount of the financial loss that the Company will incur due to the non-fulfillment of obligations of the counterparty in the event that collateral or other credit enhancement is not taken into consideration is the carrying amount of each financial asset in the consolidated financial statements. Regardless of the likelihood of an event, the maximum amount that the Company will be required to pay for guarantees due to the financial guarantees provided by the Group is the amount of ₩35,816 million (the financial guarantee limit is described in Note 30 (4)).

To minimize credit risk, we use independent external credit rating agencies' credit rating information to classify exposure based on the extent of default. If information from credit rating agencies is not available, we use officially available financial information to determine the ratings of key customers and other debtors. Our total exposure and the counterparty's credit rating are constantly reviewed and the total amount of these transactions is evenly distributed among the authorized accounts.

Meanwhile, maximum exposure amount of credit risk of the consolidated entity for the loss of non-consolidation structured entity that is explained in Note 35 is ₩91,403 million.

5) Liquidity risk
The Group establishes short-term and long-term fund management plans. The Group analyzes and reviews actual cash outflow and its budget to correspond to the maturity of financial liabilities to that of financial assets. Management of the Group believes that the financial liability may be redeemed by cash flow arising from operating activities and financial assets.

Maturity analysis of non-derivative financial liabilities according to their remaining maturity as of December 31, 2018, is as follows (Unit: Korean won in millions):

Description	Within 1 year	1 year–5 years	More than 5 years	Total
Non-interest financial instrument	₩ 2,203,993	₩ 5,077	₩ 104,769	₩ 2,313,839
Floating-rate financial instrument	29,178	8,150	67,473	104,801
Fixed-rate financial instrument	270,522	1,250,543	22,124	1,543,189
	35,816	-	-	35,816
Total	₩ 2,539,509	₩ 1,263,770	₩ 194,366	₩ 3,997,645

(*) The maximum amount of payment guarantees (USD 100,000,000 and JPY 20,000,000,000) provided to financial institutions for overseas subsidiary loans as described in Note 22.(5) above, which is the maximum amount that the Company will be required to pay if the guarantor claims the full amount of the guarantee. Based on the estimates made at the end of the reporting period, the Company believes that it is more likely than not to pay the guarantees in accordance with the payment guarantees. However, the above assumptions may change, as the probability of a credit loss to the financial receivables held by the assurance provider may change the probability that the assurance provider will make payments to the Company under the guarantee contract.

Maturity analysis above is based on the book value and the earliest maturity date by which the payments should be made. Maturity analysis of derivative financial liabilities according to their remaining maturity as of December 31, 2018, is as follows (Unit: Korean won in millions):

Description	Flow	Within 1 year	1 year–5 years	Total
Derivatives for trading:				
Foreign currency derivatives	Outflow	₩ (206,800)	₩ -	₩ (206,800)
	Inflow	207,860	-	207,860
Other	Outflow	(5,243)	-	(5,243)
Subtotal		(4,183)	-	(4,183)
Derivatives designated and hedging instruments:				
Foreign currency derivatives	Inflow	-	-	-
Subtotal		-	-	-
Total		₩ (4,183)	₩ -	₩ (4,183)

(3) Estimation of fair value

The fair values of financial instruments (i.e., financial assets held for trading and AFS financial assets) traded on active markets are determined with reference to quoted market prices. The Group uses the current bid price as the quoted market price for its financial assets.

The fair values of financial instruments not traded on an active market (i.e., over-the-counter derivatives) are determined using a valuation technique. The Group uses various valuation techniques using assumptions based on current market conditions. The fair values of long-term liabilities and financial liabilities available for settlement are determined using prices from observable current market transactions and dealer quotes for similar instruments. Where such prices are not available, a discounted cash flow analysis or other valuation technique is performed to measure their fair values.

The fair values of trade receivables and trade payables are approximated at their carrying value, less impairment loss. The Group estimates the fair values of financial liabilities as the present value of future contractual cash flows discounted based on current market rates applied to similar financial instruments.

Financial instruments that are measured subsequent to initial recognition at fair value are grouped into Levels 1 to 3, based on the degree to which the fair value is observable, as described below:

- Level 1: Fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Fair value measurements are those derived from 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: Fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

1) Financial instruments that are measured subsequent to initial recognition at fair value by fair value hierarchy levels as of December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	December 31, 2018			
Description	Level 1	Level 2	Level 3	Total
Financial assets:				
Derivative assets for trading	₩ -	₩ 1,241	₩ -	₩ 1,241
Financial assets measured at FVTPL	-	-	16,404	16,404
Financial assets at FVTOCI	35,755	-	65,058	100,813
Total	₩ 35,755	₩ 1,241	₩ 81,462	₩ 118,458
Financial liabilities:				
Derivative liabilities for trading	₩ -	₩ 181	₩ -	₩ 181
Total	₩ -	₩ 181	₩ -	₩ 181

	December 31, 2017			
Description	Level 1	Level 2	Level 3	Total
Financial assets:				
Derivative assets for trading	₩ -	₩ 1,716	₩ -	₩ 1,716
Derivative assets designated as a hedging instrument	-	82	-	82
Other	46,875	-	63,296	110,171
Total	₩ 46,875	₩ 1,798	₩ 63,296	₩ 111,969
Financial liabilities:				
Derivative liabilities for trading	₩ -	₩ 1,864	₩ -	₩ 1,864
Derivative liabilities designated as a hedging instrument	-	118	-	118
Total	₩ -	₩ 1,982	₩ -	₩ 1,982

There is no significant transfer between Level 1 and Level 2 during the current period and the prior period.

2) Valuation method and input variables that are classified as Level 2 from the financial instruments that are subsequently measured as fair values are as follows (Unit: Korean won in millions):

Description	Fair values as of December 31, 2018	Valuation technique	Input variables
Financial assets:			
Derivative instrument assets held for sale	₩ 1,241	Decision model for future prices	Discount rate and exchange rate
Financial liabilities:			
Liabilities of derivative instruments for the purpose of sale	181	Decision model for future prices	Discount rate and exchange rate

3) The Group believes that the carrying amount of financial assets and financial liabilities recognized in the consolidated statements of financial position is similar to fair value.

4) Changes in Level 3 financial assets for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

Description	Beginning balance	Change K-IFRS	Net income (loss)	Comprehensive income (loss)	Purchases	Disposals	Disposals of subsidiaries	Ending balance	Unrealized holding gain or loss
	Year ended December 31, 2018								
Other finance assets	₩ 63,296	₩ 11,646	₩ (184)	₩ 4,069	₩ 2,906	₩ (271)	₩ -	₩ 81,462	₩ 21,082
Total	₩ 63,296	₩ 11,646	₩ (184)	₩ 4,069	₩ 2,906	₩ (271)	₩ -	₩ 81,462	₩ 21,082

Description	Beginning balance	Net income (loss)	Comprehensive income (loss)	Purchases	Disposals	Disposals of subsidiaries	Ending balance	Unrealized holding gain or loss
	Year ended December 31, 2017							
AFS financial assets	₩ 53,313	₩ -	₩ 9,983	₩ -	₩ -	₩ -	₩ 63,296	₩ 16,467
Total	₩ 53,313	₩ -	₩ 9,983	₩ -	₩ -	₩ -	₩ 63,296	₩ 16,467

5) A description of the valuation techniques and the inputs used in the fair value measurement of financial instruments classified as Level 2 and Level 3 is as follows:

- Currency forward and interest rate swap

In principle, the fair value of currency forward was measured based on forward currency rates whose period is coincident with the residual period of the currency forward, and they are advertised on the market at the end of the reporting period. If forward currency rates whose periods are coincident with the residual period are not advertised on the market, the fair value of currency forward was measured by estimating the forward currency rates whose period is similar to the residual period of the currency forward. The estimation of the forward currency was performed using interpolation to advertised periodical forward currency rates. Discount rates used to measure the fair value of currency forward were determined based on yield curve from yields advertised on the market.

Discount rates and forward rates used to measure the fair value of interest rate swaps were determined based on the applicable yield curves derived from interest rates that are advertised on the market at the end of the reporting period. The fair value of interest rate swaps measured on the amount of money that discounted at an appropriate discount rate to future cash flows of interest rate swaps was estimated based on the forward rate that is obtained by the method described above.

Since the input variables that are used to measure the fair value of currency forward and interest rate swaps for the end of the reporting period are derived via the forward exchange rate and the yield curve in the market, the fair values of currency forward and interest rate swap were classified as Level 2 fair value measurement.

- Corporate bonds

The fair value of corporate bonds was measured by discount cash flow (“DCF”) method. The discount rates used in DCF were determined based on market swap rates and credit spreads of the bonds that are advertised and whose credit rating and period were similar to those of corporate bonds and cumulative redeemable preference stocks. The discount rates that influence on the fair value of corporate bonds and cumulative redeemable preference stocks significantly were classified as Level 2 fair value measurements because they resulted in observable information in the market.

- Unlisted securities and unlisted securities-linked convertible securities

The fair value of non-listed shares and unlisted securities-linked convertible securities, measured using a discounted cash flow model that is not based on observable market prices or rates, will be used to estimate the future cash flows, such as sales growth, pretax operating profit margin and the weighted-average cost of capital. Capital asset pricing model (“CAPM”) was used to calculate the weighted-average cost of capital. The key assumptions of estimation listed above are determined to have a significant impact on the fair value of non-listed shares, and the Group has classified the fair value hierarchy system on Level 3 of the fair value measurement of non-listed shares.

6) There is no change in the valuation technique used in the fair value measurement of financial instruments classified as Level 2 and Level 3.

7) The table below explains the quantitative information of fair value measurement (Level 3) that uses the input variables that are significant, but unobservable and the relationship between unobservable input variables and the fair value measurements (Unit: Korean won in millions):

Description	Fair values as of December 31, 2017		Valuation technique	Unobservable inputs	Range	Disposals
AFS financial assets	₩	62,372	Discounted cash flow method and comparable company analysis	Growth rate	0%	Increase (decrease) in fair values due to increase (decrease) in growth rate
				Discount rate	8.49%–12.27%	Decrease (increase) in fair values due to increase (decrease) in discount rate

8) A description of the valuation processes in the fair value measurement for Level 2 and Level 3 that the Group is carrying out is as follows:

The Group measures fair value of assets and liabilities for financial reporting purposes and reports the result of fair value measurements to chief financial officer directly.

Undesirable inputs that are used to estimate Level 3 fair value measurement are derived in a manner that is described below:

- Stock volatilities and stock correlation used in the measurement of the financial instruments linked with stocks (e.g., investments in convertible bonds, equity-linked securities and consideration for conversion rights) were measured based on change in stock price during certain period before the reporting period.

- Pretax profit margin and sales growth rate, which are used to measure the fair value of non-listed shares, are estimated based on the average value of pretax operating margin and sales growth rate of comparable listed companies.

- Weighted-average cost of capital discount rate that is used to measure the fair value of non-listed shares is estimated by the weighted-average, after-tax and outside capital cost; capital cost estimates of the share value data reflected for the purpose of the issuer of the shares; and capital structure based on the equity data of comparable public companies that has been derived based on the CAPM.

9) Impact on net income and other comprehensive income (loss) due to the change in reasonably available and unobservable input variables under the conditions that other input variables are constant is as follows (Unit: Korean won in millions):

Description	Unobservable input(s)	Changes of reasonably possible unobservable input	Net income				Other comprehensive income			
			Favorable change		Unfavorable change		Favorable change		Unfavorable change	
AFS financial assets	Growth rate	+/-1%	₩	-	₩	-	₩	1,035	₩	(854)
	Discount rate	+/-1%	₩	-	₩	-	₩	1,480	₩	(1,222)

10) The Company has judged that unobservable changes in inputs to reflect alternative assumptions would not change the fair value measurement significantly.

11) There is no significant change of business and economic environment affecting the fair value of the financial assets and liabilities during the current year.

35. UNCONSOLIDATED STRUCTURED ENTITIES:

As of December 31, 2018, information about the nature and risks associated with interests in unconsolidated structured entities held by the Group is as follows (Unit: Korean won in millions):

Description	Names of structured entities(*1)	Accounting title of interests on structured entities and providing financial supports	Book value of assets related to structured entities' interest	Maximum exposure to the loss of structured entities(*2)
Interests accounted in accordance with K-IFRS 1039 (except interests on subsidiaries)	Welcome Edu Service Co., Ltd. (Dormitory of Seoul National University)	Other financial assets	₩ 225	₩ -
		Loan commitments	-	7,266
	Mileseum I (Ulsan National Institute of Science and Technology)	Other financial assets	622	-
		Loan commitments	-	21,819
	Mileseum II (Ulsan National Institute of Science and Technology)	Other financial assets	86	-
		Loan commitments	-	640
	Mileseum III (Ulsan National Institute of Science and Technology)	Other financial assets	63	-
		Loan commitments	-	1,631
	Mileseum IV (Ulsan National Institute of Science and Technology)	Other financial assets	865	-
		Loan commitments	-	17,678
	Heemangseum (Daegu Gyeongbuk Institute of Science and Technology)	Other financial assets	1,423	-
		Loan commitments	-	36,180
	Heemangseum II (Daegu Gyeongbuk Institute of Science and Technology) (*)	Other financial assets	136	-
		Loan commitments	-	2,861
	Seoul National University Medical Herb	Other financial assets	412	-
		Loan commitments	-	3,328
	Total	Other financial assets	3,832	-
		Loan commitments	₩ -	₩ 91,403

(*1) As a result of operating contributions related to government-led projects:

A) In case of lack of funds during the operating period and the repayment of the loan capital and the paid-up capital of the financial investor.
B) If additional funds are required to maintain the cumulative debt repayment ratio on the date of payment of each principal during the period of operations above 1.0.
C) In cases where the Concession Agreement is terminated due to reasons attributable to the project owner or the force majeure event related to the operations during the operating period and the payment at the time of termination received by the borrower from the competent authority is insufficient to repay the loan principal and the paid-in capital of the financial investor. When a similar incident occurs, there is a supplementary obligation.

(*2) '(* 1)' is the amount that the Group will be liable for the loss of the structured company when it is terminated due to the reasons attributable to the Group as an operating investor during the period of operation. However, all of these structured companies are organized by national universities and government agencies, and we believe that the probability of actual exposure to such risks is extremely low.

36. DISPOSAL OF SUBSIDIARIES:

The Group disposed of the subsidiary Lusem Co., Ltd. and its subsidiary SBI-LG Systems Co., Ltd.

(1) Fair values for the compensation of disposal are as follows (Unit: Korean won in millions):

	December 31, 2018		December 31, 2017			
	Lucem Co., Ltd		LG Siltron Inc.		ATECAP Co., Ltd	
Disposal proceeds received as cash and cash equivalents	₩	75,000	₩	620,000	₩	37,535

(2) The book value of assets and liabilities of the subsidiary at the date of losing the controlling power is as follows (Unit: Korean won in millions):

	December 31, 2018		December 31, 2017			
	Lusem Co., Ltd.		LG Siltron Inc.		ATECAP Co., Ltd.	
Current assets:	₩	59,019	₩	493,803	₩	39,621
Cash and cash equivalents		14,113		105,400		2,034
Trade receivables and other receivables		34,178		118,367		13,520
Inventories		9,481		223,187		22,823
Other current assets		1,247		46,849		1,244
Non-current assets:		47,663		724,950		4,989
Trade receivables and other receivables		50		2,587		1,298
Other non-current assets		4,455		109,000		96
Property, plant and equipment		40,832		597,348		3,595
Intangible assets		2,326		16,015		-
Current liabilities:		32,545		500,024		6,712
Trade payables and other payables		31,503		142,740		4,452
Other current liabilities		1,042		357,284		2,260
Non-current liabilities:		5,551		323,661		363
Total value of disposed net assets	₩	68,586	₩	395,068	₩	37,535

(3) Gain on disposal of subsidiaries is as follows (Unit: Korean won in millions):

	December 31, 2018		December 31, 2017		
	Lusem Co., Ltd.		LG Siltron Inc.		ATECAP Co., Ltd.
Fair value of disposal proceeds	₩	69,999	₩	620,000	₩37,535
Incidental expenses		5,078		9,553	-
Book value of disposed net assets		46,611		201,485	37,535
Cumulative translation differences in net assets and related hedging instruments of subsidiary reclassified from equity at the time of loss of control		421		2,063	-
Gain (loss) on disposal of investments in subsidiaries	₩	18,731	₩	411,025	₩ -

(*) In addition to the gain on disposal, the Group recognized ₩625 million loss on disposal of investments in subsidiaries as a result of the liquidation.

(4) Net cash flow due to the disposal of subsidiaries is as follows (Unit: Korean won in millions):

	December 31, 2018		December 31, 2017			
	Lusem Co., Ltd.		LG Siltron Inc.		ATECAP Co., Ltd.	
Disposal proceeds received as cash and cash equivalents	₩	69,999	₩	620,000	₩	28,313
Less: Disposal of cash and cash equivalents		(19,192)		114,954		2,034
Net cash flows(*)	₩	50,807	₩	505,046	₩	26,279

(*) ₩ 7,500 million has been received for the disposal of Lusem Co., Ltd. and ₩ 5,001 million paid for the interim dividend is excluded. In addition to the above cash flow, net cash outflow amounting to ₩(2,521) million related to the liquidation of SBI-LG Systems Co., Ltd., a subsidiary, occurred.

37. DISCONTINUED OPERATIONS:

Consolidated results of discontinued operations included in the consolidated statements of comprehensive income are as follows. The comparative discontinued operating profit and loss and cash flows have been restated to include operations classified as discontinued operations in the current period.

1) Profit from discontinued operations for the years ended December 31, 2018 and 2017, is as follows (Unit: Korean won in millions):

	Lusem Co., Ltd.		Total	
Sales	₩	19,060	₩	19,060
Cost of sales		17,662		17,662
Selling and administrative expenses		1,302		1,302
Operating loss		96		96
Other operating income		341		341
Other operating expenses		406		406
Profit or loss before tax		31		31
Income tax expenses		(56)		(56)
Profit or loss from discontinued operations	₩	87	₩	87
Owners of the parent company		59		59
Non-controlling interests		28		28

	December 31, 2017							
	LG Siltron Inc.		Lusem Co., Ltd.		ATM		Total	
Sales	₩	604,217	₩	128,991	₩	74,931	₩	808,139
Cost of sales		508,899		113,606		61,439		683,944
Selling and administrative expenses		23,428		8,323		20,541		52,292
Operating loss		71,890		7,062		(7,049)		71,903
Other operating income		14,234		1,725		517		16,476
Other operating expenses		27,493		1,876		4,149		33,518
Profit or loss before tax		58,631		6,911		(10,681)		54,861
Income tax expenses		14,668		1,318		(10,218)		5,768
Subtotal		43,963		5,593		(463)		49,093
Consolidation adjustments		788		(8,681)		-		(7,893)
Fair value assessment gain or loss		-		-		(18,306)		(18,306)
Subtotal		788		(8,681)		(18,306)		(26,199)
Profit or loss from discontinued operations	₩	44,751	₩	(3,088)	₩	(18,769)	₩	22,894
Owners of the parent company (*)		23,209		(4,880)		(15,945)		2,384
Non-controlling interests		21,542		1,792		(2,824)		20,510

(*) It included the effect of deferred income tax on stock held by the investee.

2) Cash flows arising from discontinued operations for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	December 31, 2018			
	Lusem Co., Ltd.		Total	
Cash flows from operating activities	₩	(9,100)	₩	(9,100)
Cash flows from investing activities		(9,703)		(9,703)
Cash flows from financing activities		-		-
Net cash flows	₩	(18,803)	₩	(18,803)

	December 31, 2017							
	LG Siltron Inc.		Lusem Co., Ltd.		ATM		Total	
Cash flows from operating activities	₩	181,117	₩	28,055	₩	(18,765)	₩	190,407
Cash flows from investing activities		(56,414)		(1,751)		(2,387)		(60,552)
Cash flows from financing activities		(135,431)		(37,352)		-		(172,783)
Net cash flows	₩	(10,728)	₩	(11,048)	₩	(21,152)	₩	(42,928)

38. NON-CASH INVESTING AND FINANCING ACTIVITIES:

(1) Significant non-cash investing and financing activities for the years ended December 31, 2018 and 2017, are as follows (Unit: Korean won in millions):

	Year ended December 31, 2018	Year ended December 31, 2017
Transfer of construction in progress	₩ 310,212	₩ 144,861
Other payables related to acquisition of property, plant and equipment	(83,746)	73,353
Transfer of property, plant and equipment to investment property	86,694	30,656
Transfer of long-term borrowings and debentures to current portion	161,652	170,832
Transfer of deposits received to current position	79,122	92,302
Classification as assets held for sale	-	154,912

(2) Changes in liabilities arising from financing activities during the current period, are as follows (Unit: Korean won in millions):

	Beginning balance	Financing activities	Non-cash changes	Others	Ending balance
Borrowings	₩ 1,392,657	104,431	-	22,449	₩ 1,519,537

39. ASSETS HELD FOR SALE:

(1) Details of assets (liabilities) held for sale
As of December 31, 2018, details of assets (liabilities) held for sale related to the sale of Lusem Co., Ltd., are as follows.
(Unit: Korean won in millions):

Description	December 31, 2018
Cash and cash equivalents	₩ 32,922
Loans and receivables	27,712
Other current assets	9,272
Inventories	505
Other non-current receivables	50
Other non-current assets	4,398
Property, plant and equipment	32,313
Intangible assets	2,196
Total assets classified as held for sale	109,368
Trade payables and other payables (current)	34,881
Other current liabilities	1,049
Trade payables and other payables (non-current)	2,800
Other non-current liabilities	12,229
Total liabilities classified as held for sale	50,959
Total	₩ 58,409

40. EVENTS AFTER THE REPORTING PERIOD:

(1) The Group acquired 80.09% of the remaining stake of Sejong Green Power Co., Ltd., a subsidiary of the Namyang Oil Raw Energy Management Operation Company, on January 7, 2019.

(2) The Group held a board of directors' meeting on February 26, 2019, and decided to sell 60.1% of the common stock of its subsidiary, Serwon Co., Ltd., to ClearLink Business Services Limited, thereby providing a unique business capability and expertise will be strengthened. The date of completion of the sale will be finalized after the licensing process by domestic and overseas authorities.

The details of non-current assets (or disposal groups) that are not classified as held for sale and liabilities in the consolidated financial statements as a result of the classification requirements for assets held for sale and liabilities being satisfied after the reporting period are as follows:

Description		December 31, 2018
Cash and cash equivalents	₩	128,853
Financial assets at amortized cost (current)		1,373,536
Other current assets		15,277
Inventories		58,258
Financial assets at amortized cost (non-current)		199
Other non-current assets		5,109
Property, plant and equipment		133,440
Investment property		17,269
Intangible assets		14,067
Total assets classified as held for sale		1,746,008
Financial liabilities at amortized cost (current)		1,090,161
Other current liabilities		7,499
Financial liabilities at amortized cost (non-current)		150,092
Other non-current liabilities		793
Total liabilities classified as held for sale		1,248,545
Net assets classified as held for sale		497,463

(*)As of December 31, 2018, the Company recorded sales of ₩4,355,936 million, operating profit of ₩154,193 million and net income of ₩83,293 million before eliminating internal profit and loss of the above disposal group (including overseas subsidiaries).

(3) On January 28, 2019, the board of directors S & I Corporation decided to divide the CM business to carry out construction business management in order to establish independent business operation and responsible management system. The main contents of the spin-off are as follows, and it was finally approved at the shareholders' meeting on February 25, 2019, of S&I Corporation.

Description		
Split way	Drop down	
Company split	Surviving company	S&I Corporation Co., Ltd
	Newly incorporated corporation	S&I CM
Split schedule	Board resolution date	2019.01.28
	Date of shareholders' meeting	2019.02.25
	Divider day	2019.03.01

Disclosure on Execution of External Audit

We attach required disclosure on the execution of external audit performed in accordance with ***Article 18-3 of the Act on External Audit of Stock Companies.***

1. Company and Reporting Period subject to External Audit

Company	LG Corp.			
Reporting Period	2018/01/01	From	2018/12/31	To

2. Number of Participants and Details on the Hours Executed in Audit

(Unit: Number of Participants, Hours Executed)

Participant(s) Number and Hour(s) Number of Participant(s)		Engagement Quality Reviewer(s)		Audit Professional(s)						IT Specialist(s), Tax Specialist(s), and Valuation Specialist(s)		Construction contracts order-made production industry Specialist(s)		Total	
				Engagement Partner(s)		Members of KICPA (Registered)		Members of KICPA (Non-Registered)							
		2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Number of Participant(s)		3	3	2	1	11	11	4	4	9	6	-	-	29	25
Hours Executed	Interim	11	16	122	105	1,806	1,514	198	507	-	-	-	-	2,137	2,142
	Audit	31	44	81	120	1,053	1,128	434	377	198	91	-	-	1,797	1,760
	Total	42	60	203	225	2,859	2,642	632	884	198	91	-	-	3,934	3,902

3. Key Disclosure on Execution of External Audit

<table>
<tr><th>Title</th><th colspan="6">Detail</th></tr>
<tr><td rowspan="2">Audit Planning Stage</td><td>Dates Performed</td><td colspan="2">April–September 2018</td><td>5</td><td colspan="2">Days</td></tr>
<tr><td>Main Planning Work Performed</td><td colspan="5">Understanding the Company and business environments, composing the audit member, identifying and evaluating significant risk of material misstatements, deciding the nature/timing/extent of an audit, reviewing the application of professionals and determining the materiality in the application of an audit</td></tr>
<tr><td rowspan="5">Fieldwork Performed</td><td colspan="2" rowspan="2">Dates Performed</td><td colspan="2">Number of Participant(s)</td><td colspan="2">Main Fieldwork Performed</td></tr>
<tr><td>On-Site</td><td>Off-Site</td><td colspan="2"></td></tr>
<tr><td></td><td>Days</td><td>Number of Participant(s)</td><td>Number of Participant(s)</td><td colspan="2"></td></tr>
<tr><td>2018/12/03–2018/12/07</td><td>3</td><td>3</td><td>2</td><td colspan="2">Interim audit (understanding the transaction type of each process and control testing)</td></tr>
<tr><td>2019/01/09–2019/01/25</td><td>12</td><td>3</td><td>2</td><td colspan="2">External audit (substantive procedure for the material account balances and transactions and consolidation audit)</td></tr>
<tr><td rowspan="3">Physical Counts - Inventory (Observation)</td><td>Time (When Performed)</td><td colspan="2">-</td><td>-</td><td colspan="2">Day(s)</td></tr>
<tr><td>Place (Where Performed)</td><td colspan="5">-</td></tr>
<tr><td>Inventory subjected to Counts</td><td colspan="5">-</td></tr>
<tr><td rowspan="3">Physical Counts - Financial Instruments (Observation)</td><td>Time (When Performed)</td><td colspan="2">2019/01/02</td><td>1</td><td colspan="2">Day(s)</td></tr>
<tr><td>Place (Where Performed)</td><td colspan="5">LG Corp. headquarters</td></tr>
<tr><td>Financial Instruments subjected to Counts</td><td colspan="5">Cash, investment securities, memberships and others</td></tr>
<tr><td rowspan="2">External Confirmation</td><td>Bank Confirmation</td><td>O</td><td>Accounts Receivable/Payable Confirmation</td><td>O</td><td>Legal Confirmation</td><td>O</td></tr>
<tr><td>Other Confirmation</td><td colspan="5">N/A</td></tr>
<tr><td rowspan="2">Communications with Those Charged with Governance</td><td>Number of Communications</td><td>5</td><td colspan="4">Time(s) Performed</td></tr>
<tr><td>Time (When Performed)</td><td colspan="5">2018/02/22, 2018/05/10, 2018/08/09, 2018/11/08 and 2019/02/22</td></tr>
</table>

4. Communications with Audit Committee

Title	Time (When Performed)	Attendants	Method	Key Content of Discussion
1	2018/02/22	Three Audit Committee, Engagement Partner and one other person	Face-to-Face Meeting	Audit schedule and main audit matters
2	2018/05/10	Three Audit Committee, Engagement Partner and one other person	Face-to-Face Meeting	Review of interim financial statements and introduction to recent accounting trends
3	2018/08/09	Three Audit Committee, Engagement Partner and one other person	Face-to-Face Meeting	Review of interim financial statements and report on preliminary selection of key audit matters
4	2018/11/08	Three Audit Committee, Engagement Partner and one other person	Face-to-Face Meeting	Review of interim financial statements, significance in audit and selection of key audit matters
5	2019/02/22	Three Audit Committee, Engagement Partner and one other person	Face-to-Face Meeting	Report on result of external audit, independence of auditor, result of main audit matters and report on group audit matters