



**LG CNS CO., LTD.**

**SEPARATE FINANCIAL STATEMENTS  
AS OF AND FOR THE YEARS ENDED  
DECEMBER 31, 2017 AND 2016**

**ATTACHMENT: INDEPENDENT AUDITORS' REPORT**

**LG CNS CO., LTD.**

## **INDEPENDENT AUDITORS' REPORT**

English Translation of Independent Auditors' Report Originally Issued in Korean on March 14, 2018

**To the Shareholders and the Board of Directors of  
LG CNS Co., Ltd.:**

### **Report on the Separate Financial Statements**

We have audited the accompanying separate financial statements of LG CNS Co., Ltd. (the "Company"), which comprise the separate statements of financial position as of December 31, 2017 and 2016, and the related separate statements of comprehensive income, separate statements of changes in shareholders' equity and separate statements of cash flows, all expressed in Korean won, for the years ended December 31, 2017 and 2016, respectively, and a summary of significant accounting policies and other explanatory information.

### **Management's Responsibility for the Separate Financial Statements**

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

### **Auditors' Responsibility**

Our responsibility is to express an audit opinion on these separate financial statements based on our audits. We conducted our audits in accordance with Korean Standards on Auditing ("KSAs"). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the separate financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Opinion**

In our opinion, the separate financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and its financial performance and its cash flows for the years ended December 31, 2017 and 2016, in accordance with K-IFRS.

## Emphasis of Matters

Users of this audit report need to pay attention to the following matters that have no effect on audit opinion.

(1) Emphasis of matters, etc., by the auditor for the core audit items of the order-taking industry

The core audit items for the order-taking industry are to select significant matters in the separate financial statement audit through the expert judgment of the auditor and communication with the controlling organization based on the "Accounting Audit Practice Guideline 2016-1." These matters are dealt with when forming the opinion of the entire separate financial statements from the viewpoint of audit for the entire separate financial statements and we will not provide another opinion on these matters.

We reflected the results of audit procedures conducted on core audit items as follows in forming audit opinions on the separate financial statements of the Company and its subsidiaries.

### A. General matters

The contents commonly applied in relation to the core audit items of the order-taking industry described in this audit report are as follows.

As stated in Note 2 (Significant Accounting Policies) to the separate financial statements, if the outcome of construction contracts can be estimated reliably, the Company and its subsidiaries recognize the contract profit and contract cost as the profit and expenses based on the completion progress of the contract activities as of the ending date of the reporting period, respectively. The completion progress of the contract activities is measured at the rate of cumulative contract costs incurred for the work performed, excluding contract costs that do not reflect the progress stage, divided by the estimated total contract costs. If the amount added the recognized profit to (deducted from the recognized loss) and the accumulated accrued costs exceeds the amount claimed for progress, it is indicated as unclaimed construction, and if the amount claimed for progress exceeds the amount added the recognized profit to (deducted from the recognized loss) and the accumulated accrued costs, it is indicated as over-claimed construction.

### B. Profit recognition and appropriateness of the completion progress by input method

As described in Notes 3 and 19 of the separate financial statements, because we can be influenced by various uncertainties related to the outcome of future events, such as changes, in the estimation of total profit and total costs of contracts that recognize progress-based profit are made by applying the cost-based input method that was in progress at the end of the former period, and the estimation of total profit and total costs of contracts may have a negative impact on the current profit or loss or future profit and loss, we identified profit recognition and appropriateness of the completion progress by input method as a significant risk.

As of the end of the current period, the major audit procedures we conducted concerning the profit recognition and appropriateness of the completion progress of the Company and its subsidiaries by input method are as follows:

- Review of the appropriateness of accounting policies for profit recognition
- Questions and analytical review on the current progress status and significant change matters of major projects as of the ending date of the reporting period
- Analytical review on major financial indicators, such as contract amount, estimated cost, cost rate and ratio of unclaimed construction amount
- Analytical review on the fluctuation in the amount of the accumulated contract cost and the total contract cost
- Understanding the Company's overhead allocation policy and internal control test related to overhead allocation
- Performance of recalculating the completion progress independently on the contract in which the completion progress significantly fluctuated
- Testing independently by the auditor the incurrence and imputed time of input costs and the appropriateness of imputation of the cost by each construction contract

- Actual inspection on the site for major projects
- Review of the internal control of the Company related to determination of accounting policy for profit recognition by project type
- Review of the internal control in which legitimate approval holders review and approve the relevant contract for newly accepted contracts

## C. Uncertainty in estimating total contract cost and appropriateness of accounting due to the construction change

According to Note 3 of the separate financial statements, the measurement of contract profit is affected by various uncertainties related to the outcomes of future events, and the total contract cost is estimated on the basis of future expectations, such as labor cost, material cost and project duration.

As the changes in the total contractual amount and total estimated costs during the current period and the effect on the current and future profit and loss due to these changes are described in Comment 19 of the separate financial statements, and the contract profit and the estimated total contract cost may be changed, we identified the uncertainty in estimating the total contract cost and the appropriateness of accounting management due to construction changes as significant risks.

As of the end of the current period, the major audit procedures we conducted concerning the impacts of uncertainty in estimating total contract cost and appropriateness of accounting due to the construction change of the Company and its subsidiaries on the separate financial statements are as follows:

- Analytical review on the fluctuation of major constituent items of total contract cost by reporting period
- Comparison/analysis of actual cost with estimated cost to identify the cause of the difference for projects with significant difference and confirmation of the relevant evidences as necessary
- Questions regarding accounting policies of the Company related to construction changes and cancellation fee accounting
- Testing the internal control in which legitimate approval holders review and approve the construction contracts with changed contract terms
- Confirmation of the proper notification in the comment on the details of construction contract change according to the amendment contract
- Check whether additional contract cost estimate due to the construction change is reflected in estimated total contract cost and calculation of the completion progress

## D. Collectability of unclaimed construction amounts and appropriateness of setting the contract loss provision liabilities

According to Note 18 to the separate financial statements, the unclaimed construction is ₩112,196 million, a decrease by ₩15,824 million compared to ₩128,020 million at the end of the former term, which is 5.57% of the total assets. As the amount of unclaimed construction is increasing and the importance that the amount is high, we identified the collectability of the unclaimed construction amount as a significant risk. On the other hand, the contract loss provision for liabilities for the construction in progress is ₩1,932 million, and the importance of amount is not high, but there is a risk that the loss contract will not be reflected in due time, so we identified it as a significant risk.

In order to confirm the collectability of unclaimed construction amounts and appropriateness of setting the contract loss provision liabilities during the current term, the major audit procedures we conducted are as follows:

- By grasping the site where the difference is significant between the claim rate of the construction amount based on the right to claim on the contract and the actual claim rate of the construction amount, asking the cause for the delay of the claim and confirmation of the related external evidences
- Testing the effectiveness of the internal control operation for grasping and managing the signs of damages to the Company's unclaimed construction amount
- Review of the management's estimation grounds on the collectability of the unclaimed construction amount

- Questions and analytical review on the method of setting provision liabilities at the time of occurrence of loss contract and the appropriateness of the provision for loss contract as of the end of the current term
- Verification of recalculation on setting the contract loss provision liabilities

*Deloitte Anjin NL*

March 14, 2018

## Notice to Readers

This report is effective as of March 14, 2018, 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 separate financial statements and may result in modifications to the auditors' report.

**LG CNS CO., LTD. (the “Company”)**

**SEPARATE FINANCIAL STATEMENTS**

**AS OF AND FOR THE YEARS ENDED**

**DECEMBER 31, 2017 AND 2016**

The accompanying separate financial statements, including all footnote disclosures, were prepared by, and are the responsibility of, the Company.

**Kim Young Shub.**

**Chief Executive Officer**

**LG CNS CO., LTD.**

**LG CNS CO., LTD.**  
**SEPARATE STATEMENTS OF FINANCIAL POSITION**  
**AS OF DECEMBER 31, 2017 AND 2016**

	Korean won	
	Year ended December 31, 2017	Year ended December 31, 2016
	(In thousands)	
<u>ASSETS</u>		
CURRENT ASSETS:		
Cash and cash equivalents (Notes 5, 6 and 34)	₩ 180,326,415	₩ 226,311,871
Financial institution deposits (Notes 5 and 31)	22,500,000	6,500,000
Derivative assets (Notes 5 and 34)	1,715,664	1,376,168
Trade receivables, net (Notes 5, 7, 30 and 34)	650,013,420	560,691,784
Other receivables, net (Notes 5, 7, 30, 32 and 34)	36,670,333	27,142,282
Other assets (Notes 9, 19 and 30)	137,427,501	172,656,891
Inventories, net (Note 8)	35,342,860	35,540,807
Total current assets	1,063,996,193	1,030,219,803
NON-CURRENT ASSETS:		
AFS financial assets (Notes 5, 31 and 34)	23,699,573	19,061,015
Trade receivables, net (Notes 5, 7, 30 and 34)	13,206,467	9,506,252
Other receivables, net (Notes 5, 7, 30, 31 and 34)	2,762,993	16,038,387
Investments in subsidiaries (Note 13)	113,554,064	112,462,743
Investments in associates and joint ventures (Note 14)	39,649,339	44,128,634
Deferred tax assets, net (Note 29)	41,068,947	55,919,312
Other assets (Notes 9 and 30)	2,715,636	3,373,965
Property, plant and equipment, net (Note 10)	642,520,187	608,929,267
Investment property (Note 11)	24,794,936	3,472,729
Intangible assets (Note 12)	45,900,868	45,917,755
Total non-current assets	949,873,010	918,810,059
TOTAL ASSETS	₩ 2,013,869,203	₩ 1,949,029,862

(Continued)

**LG CNS CO., LTD.**  
**SEPARATE STATEMENTS OF FINANCIAL POSITION (CONTINUED)**  
**AS OF DECEMBER 31, 2017 AND 2016**

	Korean won	
	Year ended December 31, 2017	Year ended December 31, 2016
	(In thousands)	
<u>LIABILITIES AND SHAREHOLDERS' EQUITY</u>		
CURRENT LIABILITIES:		
Derivative liabilities (Notes 5 and 34)	₩ 1,835,613	₩ 3,857,423
Trade payables (Notes 5, 30 and 34)	310,283,177	306,930,556
Other payables (Notes 5 and 34)	145,792,434	112,883,761
Short-term borrowings (Notes 5, 15 and 34)	-	2,154,547
Current portion of long-term borrowings (Notes 5, 15 and 34)	149,948,723	149,984,453
Current tax liabilities (Note 29)	15,357,050	22,647,875
Provisions (Note 16)	49,460,780	39,142,031
Other liabilities (Notes 18 and 19)	119,405,871	163,881,932
Total current liabilities	<u>792,083,648</u>	<u>801,482,578</u>
NON-CURRENT LIABILITIES:		
Other payables (Notes 5, 30 and 34)	1,834,064	261,438
Long-term borrowings (Notes 5, 15 and 34)	299,176,114	299,353,937
Retirement benefit obligation (Note 17)	2,850,457	1,765,698
Provisions (Note 16)	1,875,911	4,081,035
Other liabilities (Note 18)	7,431,890	7,755,863
Total non-current liabilities	<u>313,168,436</u>	<u>313,217,971</u>
TOTAL LIABILITIES	<u>1,105,252,084</u>	<u>1,114,700,549</u>
SHAREHOLDERS' EQUITY:		
Issued capital (Note 20)	47,198,411	47,198,411
Capital surplus (Notes 20 and 21)	59,521,055	59,521,055
Accumulated other comprehensive income (loss) (Note 22)	185,807	106,121
Retained earnings (Note 23)	801,711,846	727,503,726
TOTAL SHAREHOLDERS' EQUITY	<u>908,617,119</u>	<u>834,329,313</u>
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	₩ 2,013,869,203	₩ 1,949,029,862

(Concluded)

**See accompanying notes to separate financial statements.**



**LG CNS CO., LTD.**  
**SEPARATE STATEMENTS OF INCOME**  
**FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

	Korean won	
	Year ended December 31, 2017	Year ended December 31, 2016
	(In thousands)	
Revenue (Notes 4, 24 and 30)	₩ 2,388,651,947	₩ 2,150,586,569
Cost of sales (Notes 24, 25 and 30)	(2,059,355,653)	(1,844,776,188)
Gross profit	329,296,294	305,810,381
Selling and administrative expenses (Notes 24, 25, 30 and 32)	(153,495,981)	(152,492,012)
Operating income	175,800,313	153,318,369
Financial income (Note 26)	17,746,293	21,144,164
Financial expenses (Note 26)	(20,016,381)	(17,143,596)
Other non-operating income (Note 27)	31,132,997	33,270,057
Other non-operating expenses (Note 27)	(37,870,684)	(42,343,342)
Profit before income tax expense	166,792,538	148,245,652
Income tax expense from continuing operations (Note 29)	(60,083,291)	(47,418,983)
Income from continuing operations	106,709,247	100,826,669
Income (loss) from discontinued operations (Note 36)	(18,769,319)	(17,822,155)
Profit for the year	₩ 87,939,928	₩ 83,004,514

**See accompanying notes to separate financial statements.**

**LG CNS CO., LTD.**  
**SEPARATE STATEMENTS OF COMPREHENSIVE INCOME**  
**FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

	Korean won			
	Year ended December 31, 2017		Year ended December 31, 2016	
	(In thousands)			
Profit for the year	₩	87,939,928	₩	83,004,514
Other comprehensive income (loss) after deduction of income tax:		735,441		1,327,126
Net loss on AFS financial assets		(93,397)		958,169
Actuarial gain (loss) on defined benefit plans		655,755		(100,415)
Valuation loss of derivative instruments for cash flow hedges		173,083		469,372
Total comprehensive income for the year	₩	88,675,369	₩	84,331,640

**See accompanying notes to separate financial statements.**

**LG CNS CO., LTD.**  
**SEPARATE STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**  
**FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

	Korean won					
	Issued capital	Capital surplus	Other capital items	Accumulated other comprehensive income (loss)	Retained earnings	Total
	(In thousands)					
Balance at January 1, 2016	₩ 47,187,667	₩59,961,095	₩ (6,386)	₩ (1,321,420)	₩ 652,445,412	₩758,266,368
Profit for the year				-	83,004,514	83,004,514
Net loss on AFS financial assets	-	-	-	958,169	-	958,169
Valuation losses of derivative instruments for cash flow hedges	-	-	-	-	-	-
	-			469,372		469,372
Remeasurements of the net defined benefit liability	-	-	-	-	(100,415)	(100,415)
Business combination	10,744	(867,096)	-			(856,352)
Disposal of treasury stock	-	427,056	6,386			433,442
Annual dividends	-	-	-	-	(7,845,785)	(7,845,785)
Balance at December 31, 2016	<u>₩47,198,411</u>	<u>₩59,521,055</u>	<u>₩ -</u>	<u>₩ 106,121</u>	<u>₩727,503,726</u>	<u>₩834,329,313</u>
Balance at January 1, 2017	₩47,198,411	₩59,521,055	₩ -	₩ 106,121	₩727,503,726	₩834,329,313
Profit for the year					87,939,928	87,939,928
Net loss on AFS financial assets	-	-	-	(93,397)	-	(93,397)
Valuation losses of derivative instruments for cash flow hedges	-	-	-	173,083	-	173,083
Remeasurements of the net defined benefit liability	-	-	-	-	655,755	655,755
Annual dividends	-	-	-	-	(14,387,563)	(14,387,563)
Balance at December 31, 2017	<u>₩47,198,411</u>	<u>₩59,521,055</u>	<u>₩ -</u>	<u>₩ 185,807</u>	<u>₩801,711,846</u>	<u>₩908,617,119</u>

**See accompanying notes to separate financial statements.**

**LG CNS CO., LTD.**  
**SEPARATE STATEMENTS OF CASH FLOWS**  
**FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

	Korean won	
	Year ended December 31, 2017	Year ended December 31, 2016
	(In thousands)	
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Profit for the year	₩ 87,939,928	₩ 83,004,514
Addition of expenses not involving cash outflows:		
Salaries and wages	558,838	307,126
Retirement benefits	2,249,337	1,988,627
Depreciation	67,179,868	67,867,287
Amortization of intangible assets	7,547,647	8,835,799
Bad debt expenses	8,363,029	2,118,104
Loss on valuation of inventories	-	1,363,334
Accrual of provision	34,239,904	22,262,266
Other operating expenses	2,693,465	507,445
Loss on foreign currency translation	7,147,171	2,168,755
Loss on disposal of property, plant and equipment	763,054	447,034
Impairment loss of on property, plant and equipment	16,787,017	576,188
Loss on disposal of intangible assets	779,117	243,982
Impairment loss of intangible assets	1,785,138	1,096,331
Loss on transactions of derivatives	10,596,982	14,122,842
Loss on valuation of derivatives	1,835,613	3,629,082
Interest expenses	10,159,897	16,064,582
Loss on disposal of AFS financial assets	127	9
Impairment loss on AFS financial assets	4,292,996	724
Loss on disposal of investments in subsidiaries	-	1,385,750
Impairment loss on investments in subsidiaries	1,019,589	8,159,012
Loss on disposal of investments in associates	-	39,975
Impairment loss on investments in associates	4,479,295	-
Income tax expense	49,865,093	39,037,188
Other non-operating expenses	3,999,507	12,753,760
	<u>236,342,684</u>	<u>204,975,202</u>
Deduction of items not involving cash inflows:		
Reversal of loss on valuation of inventories	408,708	-
Allowance for bad debt	459,293	-
Reversal of provision	2,793,011	5,383,428
Gain on foreign currency translation	3,231,519	4,007,425
Gain on disposal of property, plant and equipment	740,157	1,872,103
Gain on disposal of intangible assets	-	17,279
Gain on transactions of derivatives	14,436,120	16,907,684
Gain on valuation of derivatives	1,715,664	1,376,168
Interest income	3,564,099	4,905,127
Dividend income	14,128,597	14,938,374
Gain on disposals of AFS financial assets	-	21,855
Gain on disposals of investments in associates	1,877,570	487,450
(Continued)	<u>(43,354,738)</u>	<u>(49,916,893)</u>

**LG CNS CO., LTD.**  
**SEPARATE STATEMENTS OF CASH FLOWS (CONTINUED)**  
**FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

	Korean won	
	Year ended December 31, 2017	Year ended December 31, 2016
	(In thousands)	
Movements in working capital:		
Trade receivables	₩ (107,153,475)	₩ 27,033,685
Other receivables	12,757,468	(7,350,996)
Other current assets	24,921,988	(49,651,347)
Inventories	(22,258,913)	4,708,962
Non-current trade receivables	(11,135,403)	(17,094,063)
Other non-current assets	(352,502)	(197,346)
Trade payables	6,446,457	93,626,690
Other payables	(1,413,006)	50,772,210
Other current liabilities	(44,437,353)	45,089,623
Current provisions	(18,594,704)	(10,492,316)
Retirement benefit obligation	(25,332)	(1,770,213)
Other non-current liabilities	(518,800)	(1,494,500)
Other operating assets and liabilities	1,587,266	(873,845)
	<u>(160,176,309)</u>	<u>132,306,544</u>
Interest income received	2,352,552	3,182,649
Dividend income received	13,889,842	14,670,374
Interest expense paid	(8,646,757)	(15,360,614)
Income taxes paid	(42,540,348)	(46,296,588)
Net cash provided by operating activities	<u>85,806,854</u>	<u>326,565,188</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Cash inflows from investing activities:		
Decrease in financial institution deposits	-	-
Settlement of derivative instruments	14,436,120	16,907,684
Decrease in other receivables	4,729,050	1,655,714
Disposal of AFS financial assets	344,368	35,000
Decrease in other non-current receivables	158,503	40,000
Disposal of investments in subsidiaries	26,278,977	3,196,000
Disposal of investments in associates	-	195,000
Disposal of property, plant and equipment	2,257,580	5,219,510
Disposal of intangible assets	1,175,140	1,042,210
Business combination	-	5,541
	<u>49,379,738</u>	<u>28,296,659</u>
Cash outflows for investing activities:		
Increase in financial institution deposits	16,000,000	-
Settlement of derivative instruments	12,601,266	13,292,663
Increase in other receivables	8,130,295	3,083,905
Purchase of AFS financial assets	5,645,747	4,027,215
Increase in other non-current receivables	671,643	119,112
(Continued)		

**LG CNS CO., LTD.**  
**SEPARATE STATEMENTS OF CASH FLOWS (CONTINUED)**  
**FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

	Korean won	
	Year ended December 31, 2017	Year ended December 31, 2016
	(In thousands)	
Purchase of investments in subsidiaries	₩ 233,340	₩ 9,734,658
Purchase of investments in associates	-	1,594,160
Acquisition of property, plant and equipment	109,431,785	102,849,082
Acquisition of intangible assets	10,755,771	3,667,753
	<u>(163,469,847)</u>	<u>(138,368,548)</u>
Net cash used in investing activities	(114,090,109)	(110,071,889)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Cash inflows from financing activities:		
Proceeds from short-term borrowings	-	2,154,547
Issuance of debentures	149,365,460	-
Increase in government subsidy	-	525,990
Disposal of treasury stock	-	433,482
	<u>149,365,460</u>	<u>3,114,019</u>
Cash outflows for financing activities:		
Redemption of short-term borrowings	2,227,617	2,620,000
Redemption of current position of long-term borrowings	50,000,000	-
Redemption of debentures	100,000,000	100,000,000
Settlement of derivative instruments	248,630	687,452
Payment of dividends	14,387,374	7,845,606
Acquisition of treasury stock	-	41
	<u>(166,863,621)</u>	<u>(111,153,099)</u>
Net cash provided by financing activities	(17,498,161)	(108,039,080)
Net increase (decrease) in cash and cash equivalents	<u>(45,781,416)</u>	<u>108,454,219</u>
Cash and cash equivalents at beginning of year	226,311,871	117,880,449
Effects of exchange rate changes on the balance of cash held in foreign currencies	(204,040)	(22,797)
Cash and cash equivalents at end of year	<u>₩ 180,326,415</u>	<u>₩ 226,311,871</u>

(Concluded)

**See accompanying notes to separate financial statements.**

**LG CNS CO., LTD.**  
**NOTES TO SEPARATE FINANCIAL STATEMENTS**  
**AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

**1. GENERAL:**

LG CNS Co., Ltd. (the “Company”), was incorporated in 1987 under the laws of the Republic of Korea to engage in the business of system integration, software design and development, providing information-processing services and leasing computer hardware. It was organized under a joint venture agreement among LG Engineering Co., Ltd., E.D.S. World Corporation (Far East) and others.

As of December 31, 2017, the issued capital is ₩47,198 million, and the Company’s shareholders are LG Corp. (84.95%) and others.

**2. STANDARDS AFFECTING PRESENTATION, DISCLOSURE AND SIGNIFICANT ACCOUNTING POLICIES:**

The Company has adopted the Korean International Financial Reporting Standards (“K-IFRS”) and these separate financial statements of the Company are in accordance with K-IFRS 1027 (Consolidated and Separate Financial Statements), presented by an investor with joint control or significant influence, in which the investments are accounted for on the basis of cost method, K-IFRS 1039 ‘Financial instruments’ or K-IFRS 1028 -*Investment in Associates and Joint Ventures*.

The significant accounting policies under K-IFRS followed by the Company in the preparation of its separate financial statements are summarized below. The accounting policies are applied consistently to the separate financial statements for the current period and the comparative period.

(1) Basis of preparing separate financial statements

1) Basis of measurement

The accompanying separate financial statements have been created based on a historical cost basis, with the exception of certain non-current assets and financial assets measured at revalued amount and fair value at the end of each reporting period. Historical cost is commonly measured in fair value of cost to acquire the asset.

2) Functional currency

The Company’s separate financial statements are presented in the currency of the primary economic environment in which the entity operates (its functional currency). The Company’s functional currency for the separate financial statements is Korean won.

(2) Enacted or amended standards

1) Newly adopted and revised standards, their interpretations and thereby changes in accounting policies being effective for the financial year beginning January 1, 2017, are as follows:

Amendments to K-IFRS 1007 – Statement of Cash Flows

The amendments require an entity to provide disclosures that enable users of the separate financial statements to evaluate changes in liabilities arising from financing activities, including both cash and non-cash changes. Additional disclosures required related to the first-time application of these amendments in the current year are in

Note 31. Consistent with the transition provisions of the amendments, the Company has not disclosed comparative information for the prior period. Apart from the additional disclosure in Note 31, the application of these amendments has no material impact on the disclosures or the amounts recognized in the Company's separate financial statements.

#### Amendments to K-IFRS 1012 – Income Taxes

The amendments clarify that in evaluating the deferred tax assets arising from deductible temporary difference of debt instruments measured at fair value, the carrying amount of an asset does not limit the estimation of probable future taxable profits. The application of these amendments has no material impact on the disclosures or the amounts recognized in the Company's separate financial statements.

#### Annual Improvements to K-IFRS 2014-2016 Cycle

The Company has applied the amendments to K-IFRS 1112—Share-based Payment included in the annual improvements to K-IFRS 2014-2016 Cycle for the first time in the current year. The other amendments included in this package are not yet mandatorily effective and they have not been early adopted by the Company.

The amendments state that an entity need not provide summarized financial information for interests in subsidiaries, associates or joint entities that are classified (or included in a disposal group that is classified) as held for sale. The amendments clarify that this is the only concession from the disclosure requirements for K-IFRS 1112.

2) The Company has not applied the following new and revised K-IFRS that have been issued, but are not yet effective:

#### Amendments to K-IFRS 1109 – Financial Instruments

The amendments to K-IFRS 1109 contain the requirements for the classification and measurement of financial assets and financial liabilities based on a business model, whose objective is achieved both by collecting contractual cash flows and selling financial assets, and based on the contractual terms that give rise on specified dates to cash flows, impairment methodology based on the expected credit losses, broadened types of instruments that qualify as hedging instruments, and the types of risk components of non-financial items that are eligible for hedge accounting and the change in the hedge effectiveness test. The amendments are effective for annual periods beginning on or after January 1, 2018.

In order to assess the financial impact of the first application of K-IFRS 1109, the Company conducted a preliminary assessment of the potential impact on the separate financial statements for 2017 based on the current situation and available information as of December 31, 2017, and if this standard is applied, the expected financial impact on the separate financial statements is as follows.

The Company will analyze more specific financial impacts based on additional information in the future and the results of the preliminary assessment as of December 31, 2017, may be changed based on additional information that the Company can use in the future.



#### Classification and measurement of financial assets

As of December 31, 2017, the Company retains loans and receivables amounting to ₩725,153,213 thousand, available-for-sale (“AFS”) financial assets amounting to ₩23,699,573 thousand and financial assets recognized as profit and loss in the current period amounting to ₩1,715,664 thousand.

According to K-IFRS 1109, cash flow consisting of only interest on principal and principal balance on a particular day occurs on the basis of the terms of the contract and only the debt instruments that are intended to receive contractual cash flows can be measured as amortized cost. As of December 31, 2017, the Company measures loans and receivables amounting to ₩725,153,213 thousand as amortized costs.

According to the results of the preliminary impact assessment, when applying K-IFRS 1109 to the above financial assets as of December 31, 2017, mostly cash flow consisting of only interest on principal and principal balance occurs on the basis of the terms of the contract and it is intended to receive contractual cash flows, it is judged that it does not have a significant impact on the separate financial statements by classifying as items measured as amortized costs.

According to K-IFRS 1109, equity instruments that are not held for short-term trading purposes can be selected irrevocably by designating as other comprehensive income - fair value measurement items at initial recognition point, and this comprehensive income will not be recycled to the current profit and loss subsequently. As of December 31, 2017, equity instruments classified as AFS financial assets of the Company are ₩21,754,800 thousand, and no unrealized valuation profit and loss related to AFS equity instruments is recycled to the current profit and loss during fiscal year 2017.

According to the results of the preliminary impact assessment, as the Company designates equity instruments for long-term investment, which comprises most of the AFS equity instruments, it is judged that the relevant financial assets do not have a significant impact on the separate financial statements even though K-IFRS 1109 is applied.

According to K-IFRS 1109, debt instruments where cash flows on the basis of the terms of the contract do not consist of only interest on principal and principal balance and equity instruments, which are not designated as other comprehensive income - fair value measurement items, shall be measured as the current profit and loss - fair value. As of December 31, 2017, the Company retains ₩1,715,664 thousand of derivatives classified as financial assets recognized as profit and loss for the current term.

According to the result of the preliminary impact assessment, when applying K-IFRS 1109 to financial assets recognized as current profit and loss as of December 31, 2017, most of them are classified as current profit and loss - fair value measurement items and it is judged that the relevant financial assets have little impact on the separate financial statements.

#### Classification and measurement of financial liabilities

The Company recognized ₩1,836,613 thousand as current loss in accordance with the change in fair value related to the current profit and loss - fair value measurement financial liabilities among ₩908,870,125 thousand of financial liabilities as of December 31, 2017.

According to the results of the preliminary impact assessment, as the financial liabilities recognized for the current profit and loss as of December 31, 2017, have mostly short terms of expiration and fluctuation in the credit risk of financial liabilities is small, it is judged that the financial liabilities do not have a great impact on the separate financial statements even though K-IFRS 1109 is applied.

#### Impairment methodology: Financial assets and contractual assets

In K-IFRS 1109, financial assets whose credit is damaged at the initial recognition shall be counted as loss reserves for only cumulative changes in expected credit losses over the entire period after the initial recognition.

The Company established loss reserves of ₩33,152,856 thousand for loans and receivables as of December 31, 2017. As retaining loans and receivables have no significant financial elements, it is judged to have no significant difference from the loss reserves of the Company as of December 31, 2017.

#### Risk aversion accounting

When applying the risk aversion accounting of K-IFRS 1109, the risk aversion accounting of business can be applied to some transactions that do not meet the application requirements for risk aversion accounting of K-IFRS 1109, and the fluctuation of the current profit and loss may be reduced. As of December 31, 2017, there is no liability that applies the risk aversion accounting. By applying risk aversion accounting, nothing was recognized as current profit and loss during the fiscal year 2017 among the fair value change amount of the fair value risk aversion target items, but the fair value change amount of the cash flows risk aversion means recognized as other comprehensive income is ₩173,083 thousand. As of December 31, 2017, there is no the fair value change amount of the cash flows risk aversion means accumulated as other comprehensive income.

#### Amendments to K-IFRS 1115 – Revenue from Contracts with Customers

The core principle under K-IFRS 1115 is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The amendments introduce a five-step approach to revenue recognition and measurement: 1) identify the contract with a customer, 2) identify the performance obligations in the contract, 3) determine the transaction price, 4) allocate the transaction price to the performance obligations in the contract and 5) recognize revenue when (or as) the entity satisfies a performance obligation. This standard will supersede K-IFRS 1011 - Construction Contracts, K-IFRS 1018- Revenue, K-IFRS 2113 - Customer Loyalty Programmes, K-IFRS 2115-Agreements for the Construction of Real Estate, K-IFRS 2118 - Transfers of Assets from Customers and K-IFRS 2031-Revenue-Barter Transactions Involving Advertising Services. The amendments are effective for annual periods beginning on or after January 1, 2018.

Current K-IFRS 1018 identifies transaction forms, such as sales of goods, rendering of services, interest, royalties, dividends and construction contracts; however, according to K-IFRS 1115 every contract is identified by five-step revenue recognition model (①identify the contract with a customer, ②identify the performance obligations in the contract, ③determine the transaction price, ④allocate the transaction price to the performance obligations in the contract and ⑤recognize revenue when (or as) the entity satisfies a performance obligation.)

To prepare for the adoption of K-IFRS 1115, the Company has formed a TF team composed of employees of the finance department and an accounting firm. The TF team conducted a preliminary assessment of the potential impact on the Company's application of K-IFRS 1115 through analyzing the current status and identifying issues related to revenue recognition based on the project contract status and information available to the Company, and there was no significant impact on the Company. The Company also implemented additional process and system maintenance to apply a five-step revenue recognition model

#### Enactment of K-IFRS 1116—Leases

IFRS 16 introduces a comprehensive model for the identification of lease arrangements and accountings treatments for both lessors and lessees. IFRS 16 will supersede the current lease guidance, including K-IFRS 1017 - Leases and the related interpretations when it becomes effective. The Company currently plans to apply K-IFRS 1116 in the period beginning on January 1, 2019.

K-IFRS 1116 distinguishes leases and service contracts on the basis of whether an identified asset is controlled by a customer. Distinctions of operating leases and finance leases are removed for lessee accounting, and are replaced by model where a right-of-use asset and corresponding liability have to be recognized for all leases by lessees,

except for short-term leases and leases of low-value assets. The right-of-use asset is initially measured at cost and subsequently measured at cost (subject to certain exceptions), less accumulated depreciation and impairment losses, adjusted for any remeasurement of the lease liability. The lease liability is initially measured at the present value of the lease payments that are not paid at that date. Subsequently, the lease liability is adjusted for interest and lease payments, as well as the impact of lease modifications, amongst others. Furthermore, the classification of cash flows will also be affected as operating lease payments under K-IFRS 1017 are presented as operating cash flows; whereas under the K-IFRS 1116 model, the lease payments will be split into a principal and an interest portion, which will be presented as financing and operating cash flows.

In contrast to lessee accounting, K-IFRS 1116 substantially carries forward the lessor accounting requirements in K-IFRS 1017, and continues to require a lessor to classify a lease either as an operating lease or a finance lease. Furthermore, extensive disclosures are required by K-IFRS 1116.

As of December 31, 2017, the Company has entered into an operating lease agreement amounting to W70,453,608 thousand. K-IFRS 1017 does not require the recognition of a liability for a license asset or future payment of the lease for such a lease, but instead requires a specific disclosure of the operating lease as noted in Note 32. According to our preliminary assessment, these leases are expected to meet the definition of a lease under the standard, and accordingly, if the Company adopts this standard, the lessee will recognize all the leases, except short-term and minority assets. The requirements of these standards, which require recognition of the rights of assets and related liabilities, are expected to have a significant impact on the amounts recognized in the separate financial statements, and we are analyzing the potential impact of these standards.

In contrast, 1) for finance leases where the Company is a lessee and 2) in cases where the Company is a lessor, the Company does not anticipate that the application of K-IFRS 1116 will have a significant impact on the amounts recognized in its separate financial statements.

#### Amendments to K-IFRS 1102—Share-based Payment

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 Company 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 amendments are effective for annual periods beginning on or after January 1, 2018.

#### Amendments to K-IFRS 1040 – Investment Property

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 amendments are effective for annual periods beginning on or after January 1, 2018, with earlier application permitted. Entities can apply the amendments either retrospectively (if this is possible without the use of hindsight) or prospectively.

#### Enactment of K-IFRS Interpretation 2122 – Foreign Currency Transactions and Advance Consideration

The amendments to K-IFRS Interpretation 2122 clarify that the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income is the date on

which an entity pays or receives advance consideration. The Company currently plans to apply the amendments in the period beginning on January 1, 2018, and anticipates that the application of these amendments will have no significant impact on the Company's separate financial statements.

#### Annual Improvements to K-IFRS 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 entities 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 entities 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 amendments apply retrospectively with earlier application permitted.

The Company currently plans to apply the amendments in the period beginning on January 1, 2018, and anticipates that the application of these amendments will have no significant impact on the Company's separate financial statements as the Company is neither a first-time adopter of IFRS nor a venture capital organization. In addition, the Company does not have any share in associates or joint ventures that are investment companies.

The Company is currently reviewing the effect of the amendments to the separate financial statements.

#### 3) Accounting Treatment related to the Emission Rights Cap and Trade Scheme

The Company classifies the emission rights as intangible assets. Emission rights allowances, which the government allocated free of charge, are measured at nil and emission rights allowances purchased are measured at cost, which the Company paid to purchase the allowances. If emission rights, which the government allocated free of charge, are sufficient to settle the emission rights allowances allotted for vintage year, the emissions liabilities are measured at nil. However, for the emission liabilities that exceed the allowances allocated free of charge, the shortfall is measured at best estimate at the end of the reporting period.

#### (3) Business combination

Acquisition of businesses is 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 Company, liabilities incurred by the Company to the former owners of the acquiree and the equity interests issued by the Company 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, 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 Company entered into to replace share-based payment arrangements of the acquiree are measured in accordance with K-IFRS 1102, *Share-based Payment*, at the acquisition date; and
- Assets (or disposal groups) that are classified as held for sale in accordance with K-IFRS 1105, *Non-current Assets Held for Sale and Discontinued Operations*, are measured in accordance with that standard.

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

When the consideration transferred by the Company 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, *Financial Instruments: Recognition and Measurement*, 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 Company's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date (i.e., the date when the Company 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 as profit or loss where such treatment would be appropriate if that interest were disposed of.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Company 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

In preparation of the Company's separate financial statements, any transaction that occurred in currency other than its functional currency will be recorded in translated amount using the exchange rate of the transaction. At the end of the reporting period, all monetary assets and liabilities will be translated using the exchange rate at the end of the reporting date. Meanwhile, non-monetary assets and liabilities measured at fair value will be retranslated using the exchange rate on the day of fair value evaluation, whereas non-monetary assets and liabilities measured at historical cost will not be translated.

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; and
- Exchange differences on transactions entered into in order to hedge certain foreign currency risks;

#### (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 acquisition). Bank overdraft is accounted for as short-term borrowings.

#### (6) Financial instruments

Financial assets and financial liabilities are recognized when the entity becomes a party to the contractual provisions of the instruments. 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 are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss ("FVTPL") are recognized immediately in profit or loss.

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.

Financial assets are classified into the following specified categories: 'financial assets at FVTPL,' 'held-to-maturity investments,' 'AFS financial assets' and 'loans and receivables.' The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

##### 1) 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. 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) through the expected life of the debt instrument, or, where appropriate, a shorter period, to the net carrying amount on initial recognition. Income is recognized on an effective interest basis for debt instruments other than those financial assets classified as FVTPL.

## 2) Financial assets at FVTPL

FVTPL includes financial assets held for trading and financial assets designated at FVTPL upon initial recognition. A financial asset is classified as held for trading if it has been acquired principally for the purpose of selling in the near term. Financial instruments containing one or more embedded derivatives are treated separately from the host contract and are classified as held for trading as long as they are not designated as hedge and effective. Transaction costs attributable to acquisition upon initial recognition are immediately recognized in profit or loss in the period incurred.

Financial assets are classified as at FVTPL when the financial asset is either held for trading or is designated as at FVTPL.

A financial asset is classified as 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 Company 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 asset, other than a financial asset held for trading, 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; or
- The financial asset forms part of an entity 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 Company'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 1039 permits the entire combined contract (asset or liability) to be designated as at FVTPL.

Financial assets at FVTPL are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss.

## 3) Held-to-maturity investments

Non-derivative financial assets with fixed or determinable payments and fixed-maturity dates that the Company has the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are measured at amortized cost using the effective interest method, less any impairment, with revenue recognized on an effective yield basis.

## 4) Financial assets AFS

Non-derivative financial assets that are not classified as held to maturity; held for trading; designated as at FVTPL; or loans and receivables are classified as financial assets AFS.

They are subsequently measured at fair value at the end of each reporting period. Changes in the carrying amount of AFS monetary financial assets relating to changes in foreign currency rates (see below), interest income calculated using the effective interest method and dividends on AFS equity investments are recognized in profit or loss. Other changes in the carrying amount of AFS financial assets are recognized in other comprehensive income and accumulated under the heading of investment revaluation reserve. When the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously accumulated in the investment revaluation reserve is reclassified to profit or loss.

Dividends on AFS equity instruments are recognized in profit or loss when the Company's right to receive the dividends is established.

The fair value of AFS monetary financial assets denominated in a foreign currency is determined in that foreign currency and translated at the spot rate prevailing at the end of the reporting period.

5) Loans and receivables

Trade receivables, loans and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables.' Loans and receivables are measured at amortized cost using the effective interest method, less any impairment. Interest income is recognized by applying the effective interest rate, except for short-term receivables when the effect of discounting is immaterial.

6) Impairment of financial assets

Financial assets other than those at FVTPL are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired when there is objective evidence that as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

For listed and unlisted equity investments classified as AFS, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment.

For all other financial assets, including redeemable notes classified as AFS and finance lease receivables, objective evidence of impairment could include:

- Significant financial difficulty of the issuer or counterparty;
- Default or delinquency in interest or principal payments;
- It becoming probable that the borrower will enter bankruptcy or financial reorganization; or
- The disappearance of an active market for that financial asset because of financial difficulties.

For certain categories of financial assets, such as trade receivables, assets that are assessed not to be impaired individually are, in addition, assessed for impairment on a collective basis. Objective evidence of impairment for a portfolio of receivables could include the Company's past experience of collecting payments, an increase in the number of delayed payments in the portfolio past the average credit period, as well as observable changes in national or local economic conditions that correlate with default on receivables.

For financial assets carried at amortized cost, the amount of the impairment loss recognized is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the financial asset's original effective interest rate.

For financial assets that are carried at cost, the amount of the impairment loss recognized is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the financial asset's original effective interest rate. Such impairment loss will not be reversed in the subsequent period.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss.

When an AFS financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the period.

For financial assets measured at amortized cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortized cost would have been had the impairment not been recognized.

In respect of AFS equity securities, impairment losses previously recognized in profit or loss are not reversed through profit or loss. In respect of AFS debt securities, impairment losses are subsequently reversed through profit or loss if an increase in the fair value of the investment can be objectively related to an event occurring after the recognition of the impairment loss.



#### 7) Derecognition of financial assets

The Company 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 Company neither transfers, nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Company recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Company retains substantially all the risks and rewards of ownership of a transferred financial asset, the Company continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

#### (7) Inventories

Acquisition cost of inventory includes purchase cost, conversion cost and other incidental costs that made it possible for inventory to be at the current state. Cost is the systematic distribution of fixed and variable indirect cost that is used in a way most appropriate for each type of inventory and individual measurement is used for each unit of cost, except for those of ATM measured under moving-average method.

Also, inventory is measured at lower of cost and net realizable value that is estimated selling price through normal course of business, less additional completion cost and selling expenses. Net realizable value will be remeasured at each subsequent period. When there is a clear evidence that the circumstance that caused the impairment is resolved or changes in economic environment increased the net realizable value, the impairment will be reversed up to the limit of initial book value.

#### (8) Investments in subsidiary, associates and joint ventures

The Company has adopted the K-IFRS and these separate financial statements of the Company are in accordance with K-IFRS 1027, *Consolidated and Separate Financial Statements*, presented by an investor with joint control or significant influence, in which the investments are accounted for on the basis of cost method or K-IFRS 1039, *Financial instruments*.

The Company applied the cost method when evaluating the investment on subsidiaries, associates and joint ventures in accordance with K-IFRS 1027, *Consolidated and Separate Financial Statements*. On the other hand, the dividend income from the subsidiaries, associates and joint ventures is recognized in profit or loss when the right to receive the payment confirmed.

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

A joint venture is a 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 requirements of K-IFRS 1036, *Impairment of Assets*, are applied to determine whether it is necessary to recognize any impairment loss with respect to the Company'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 and 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.

#### (9) 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, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

When a Company entity undertakes its activities under joint operations, the Company 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 Company accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the K-IFRS applicable to the particular assets, liabilities, revenues and expenses.

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

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

#### (10) 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.

For the purpose of impairment testing, goodwill is allocated to each of the Company's cash-generating units that is expected to benefit from the synergies of the combination.

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 separate statements of comprehensive income. An impairment loss recognized for goodwill is not reversed in the 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.

(11) 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 its 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 it at the site at which it is located.

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

The Company does not depreciate land and some tangible assets, and depreciation is computed using the straight-line method based on the estimated useful lives of the assets as follows:

	<u>Estimated useful lives (years)</u>
Buildings	25–40
Structures	40
Furniture and fixtures	4–25
Other property	3–20

The Company reviews the depreciation method and 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 accounting estimate.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the assets. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

(12) Investment property

Investment property held to earn rentals and/or for capital appreciation (including property under construction for such purposes) is measured initially at its cost, including transaction costs. Subsequent to initial recognition, investment property is measured at cost, less accumulated depreciation and accumulated impairment losses.

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

Among the investment properties, land is not depreciated. However, investment properties other than land are depreciated over 25 to 40 years of their useful lives using the straight-line method.

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.

### (13) 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 its estimated useful life. Intangible assets acquired separately compose of development costs, industrial property, software, membership, etc. They are amortized using the straight-line method over 5 to 10 years with no residual value.

In relation to intangible assets with definite useful lives, the estimated useful life and amortization method are reviewed at the end of each annual reporting period, with the effect of any changes in estimate being accounted for as change in accounting estimates.

#### 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; and
- 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, and are recognized in profit or loss when the asset is derecognized.

#### (14) Impairment of tangible and intangible assets other than goodwill

At the end of each reporting period, the Company 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 Company 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 and 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. Where an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or the cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

#### (15) 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 Company are recognized at the proceeds received, net of direct issue costs.

##### 3) Financial liabilities

Financial liabilities are recognized when the Company becomes a party to the contractual provisions of the instruments. Financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the issue of financial liabilities are added to or deducted from the fair value of the financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to acquisition of financial liabilities at FVTPL are recognized immediately in profit or loss.

Financial liabilities are classified as either financial liabilities at FVTPL or other financial liabilities.

##### 4) Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is either held for trading or it is designated as 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 Company 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 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; or
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Company'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 1039 permits the entire combined contract (asset or liability) to be designated as at FVTPL.

Financial liabilities at FVTPL are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss.

#### 5) Other financial liabilities

Other financial liabilities are subsequently measured at amortized cost using the effective interest method, with interest expense recognized on an effective yield basis.

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 through the expected life of the financial liability, or (where appropriate) a shorter period, to the net carrying amount on initial recognition.

#### 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 a debt instruments.

Financial guarantee contract liabilities are initially measured at their fair values and, if not designated as at FVTPL, are subsequently measured at the higher of:

- The amount of the obligation under the contract, as determined in accordance with K-IFRS 1037; and
- The amount initially recognized, less cumulative amortization recognized in accordance with the K-IFRS 1018, *Revenue*

#### 7) Derecognition of financial liabilities

The Company derecognizes financial liabilities when its obligations are discharged, canceled or they expire.

## (16) 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 Company as lessor

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Company's net investment in the leases. Finance lease interest income is allocated to accounting periods so as to reflect an effective interest rate on the Company'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 Company as lessee

Assets held under finance leases are initially recognized as assets and liability of the Company at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. The financial charge, except for the case that it is capitalized as part of the cost of that asset according to the Company's accounting for borrowing costs, is immediately expensed in the period in which it is incurred. Contingent rents are charged 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. 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.

## (17) 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.

## (18) Derivative financial instruments

Derivatives are initially recognized at fair value at the date the derivative contract is entered into and is 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 such case, the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

A derivative with a positive fair value is recognized as a financial asset; 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 non-derivative host contracts are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are closely related to those of the host contracts and the 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 Company designates certain hedging instruments, which include derivatives, embedded derivatives and non-derivatives in respect of 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 Company 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 separate statements of comprehensive income relating to the hedged item.

Hedge accounting is discontinued when the Company 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 and is included in the 'other gains and losses' line item.

Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item is recognized in profit or loss, in the same line item of the separate 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 Company revokes the hedging relationship, when the hedging instrument expires or is sold, terminated or exercised or when 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.



#### (19) Retirement benefit costs and termination benefits

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

For defined benefit retirement benefit plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each 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 separate 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, past service cost, as well as gains and losses on curtailments and settlements), net interest expense (income) and remeasurement.

The Company 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 separate statements of financial position represents the actual deficit or surplus in the Company'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.

A liability for a termination benefit is recognized at the earlier of when the entity can no longer withdraw the offer of the termination benefit and when the entity recognizes any related restructuring costs.

#### (20) Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event; it is probable that the Company 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 Company 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 Company's obligation.

(21) Government grants

Government grants are recognized when criteria for government grants are complied with and receipt is reasonably assured. If government grants are awarded for acquisition, and construction of tangible assets, it is recognized by deducting the grant amount from the asset and is depreciated using a systematic and reasonable method over the useful life of the asset.

Other government grants are recognized as revenue using a systematic standard to match the cost it is intended to reimburse. Government grants that reimburse losses occurred in the prior period or government grants awarded without further costs incurred are recognized in profit or loss of the period in which the rights to that grant arise.

(22) Revenue recognition

Revenue consists of fair value of considerations received or receivable, net of value-added tax. The Company recognizes revenue when it is reliably measurable that inflows of future economic benefits are likely and cost incurred or to be incurred of transaction is reliably measurable. For each type of sales, the Company recognizes revenue as follows:

1) Sale of goods

The Company 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 Company recognizes revenue for the manufactured goods at acceptance and merchandises at delivery. Revenue is recognized net of rebates, discounts and returns derived from previous experience and provision is set for estimated return amounts.

2) Rendering of service

The Company recognizes revenue from rendering of service by percentage-of-completion method when the outcome of the transaction can be estimated reliably, stage of completion at reporting date can be measured reliably and the costs incurred and the cost to complete the transaction can be measured reliably.

3) Construction contracts

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, respectively, by reference to the stage of completion of the contract activity at the reporting date.

The percentage of completion of a contract activity is reliably measured using the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs, surveys of work performed or completion of a physical proportion of the contract work. Variation, claim and incentives are included in revenue limited to the amount previously settled with the customer. When outcome of a construction contract cannot be estimated reliably, revenue shall be recognized only to the extent of contract costs incurred that are probable to be recovered and contract costs shall be recognized as an expense in the period in which they are incurred. An expected loss on the construction contract shall be 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 amounts due to customers for contract work. Amounts received before the related work is performed are included in the separate 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 separate 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 time 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 asset's net carrying amount on initial recognition.

#### 5) Rental income

The Company's policy for recognition of revenue from operating leases is described in Note 2 (16).

#### (23) Current tax payable and deferred tax

Income tax expense consists of current tax and deferred tax.

##### 1) Current tax payable

The current tax is computed based on the taxable profit for the year. The taxable profit differs from the profit for the period as reported in the separate statements of comprehensive income because it excludes items of income or expenses that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Company's liability for current tax expense 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 separate 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. The Company recognizes a deferred tax liability for all taxable temporary differences associated with investments in subsidiaries, branches and associates, and interests in joint arrangements, except to the extent that the Company is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. A deferred tax asset for all deductible temporary differences arising from above-mentioned investments is recognized, to the extent, and only to the extent, it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized. The carrying amount of 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 is realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow the manner in which the Company 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 when there is a legally enforceable right to offset current tax assets against current tax liabilities and when they relate to income tax levied by the same taxation authority and the Company intends to settle its current tax assets and liabilities on a net basis.

##### 3) Recognition of current tax payable and deferred tax

Current and deferred taxes are recognized in profit or loss, except for those related to items other than profit or loss, such as other comprehensive income (loss) or items recognized directly in equity (current taxes and deferred taxes are both recognized in items other than profit or loss) of same or different accounting periods or items arising from initial accounting treatments of a business combination. For business combinations, income tax effects are considered when measuring goodwill or determining Company's shares in fair value of acquiree's identifiable assets, liabilities and contingent liabilities that exceed cost of business combination.

(24) Treasury stock

When the Company repurchases its equity instruments (treasury stock), the incremental costs, net of tax effect, are deducted from the shareholders' equity and recognized as other capital items deducted from the total equity in the separate statements of financial position. In addition, profits or losses from purchase, sale or retirement of treasury stocks are directly recognized in shareholders' equity.

(25) Non-current 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 continuous usage. 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 be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

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.

(26) 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 Company 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 separate 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 realisable 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 Level 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; and
- Level 3 inputs are unobservable inputs for the asset or liability.

### 3. SIGNIFICANT CONSIDERATION AND MAJOR SOURCES OF ESTIMATION UNCERTAINTIES:

When the Company applies accounting policies, the carrying amount of assets and liabilities that are not identifiable from other information should be judged, estimated and assumed by management. Estimation and assumptions are based on other factors related to historical experience. Actual results may be different from those estimations. Estimation and assumptions are continuously reviewed. Effects of changes in accounting estimates are recognized during the period of changes made only in case that those changes affect a corresponding period. Effects of changes are recognized during both current and future periods and, in such case, those changes affect both periods.

#### (1) Uncertainty on the estimation of the total construction revenue

Total contract revenue is measured based on the contract amount initially agreed upon, but can be increased or decreased as the terms of the contract change in the course of performing the contract, so measurement of contract revenue is subject to various uncertainties related to the outcome of future events. The Company includes in the contract revenue when it is likely that the customer will approve a change in the amount of revenue due to a change in the terms of the contract or if the Company is more likely to meet our performance criteria and can measure the amount more reliably.

#### (2) Estimation of the total construction cost

The amount due from the customer is affected by the percentage of completion, which is estimated by reference to the total cost incurred and the total contract cost is estimated by reference to the expected future figures, such as the material costs, the labor costs and the contract period. The Company periodically reviews whether there is any significant change in the estimation of the total construction costs and reflects the changes in the percentage of completion at the end of the reporting period.

### 4. SEGMENT INFORMATION:

The Company reports segment information based on K-IFRS 1108, *Operating segments*. The information for the entity level is as follows (Unit: Korean won in thousands):

#### (1) Sales

Inventory sold or services rendered	December 31, 2017	December 31, 2016
Merchandise	₩ 388,670,132	₩ 310,177,245
Service	944,963,553	937,452,137
Construction	1,055,018,262	902,957,187
Total	₩ 2,388,651,947	₩ 2,150,586,569

#### (2) Information about the region.

Our sales are all generated and all of the non-current assets are located within the country (Republic of Korea).

#### (3) Information on major customers

Customer sales, which account for more than 10% of the current year and the electricity of the Company as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	December 31, 2017	December 31, 2016
LG Electronics Inc. (*)	₩ 534,130,872	₩ 503,417,216
LG Uplus Co., Ltd. (*)	261,612,655	210,397,556

(\*) It includes the transaction history of subsidiaries.

## 5. CLASSIFICATION OF FINANCIAL INSTRUMENTS AND FAIR VALUE:

(1) The carrying amount and fair value of financial assets and liabilities as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

### 1) Financial assets

Financial assets	Account	December 31, 2017		December 31, 2016	
		Carrying amount	Fair value	Carrying amount	Fair value
Cash and cash equivalents	Cash and cash equivalents	₩180,326,415	₩180,326,415	₩226,311,871	₩226,311,871
Financial assets at FVTPL	Derivative assets for trading	1,715,664	1,715,664	1,376,168	1,376,168
AFS financial assets	Marketable equity securities	1,944,773	1,944,773	2,160,394	2,160,394
	Unmarketable equity securities (*)	21,754,800	21,754,800	16,900,621	16,900,621
	Subtotal	23,699,573	23,699,573	19,061,015	19,061,015
Loans and receivables	Financial institution deposits	22,500,000	22,500,000	6,500,000	6,500,000
	Trade receivables	663,219,887	663,219,887	570,198,036	570,198,036
	Loans	10,193,096	10,193,096	6,474,827	6,474,827
	Other accounts receivable	11,156,248	11,156,248	17,238,696	17,238,696
	Accrued income	174,678	174,678	131,308	131,308
	Deposits	17,909,304	17,909,304	19,335,838	19,335,838
	Subtotal	725,153,213	725,153,213	619,878,705	619,878,705
	Total	₩930,894,865	₩930,894,865	₩866,627,759	₩866,627,759

(\*) Meanwhile, some unmarketable equity securities of financial assets categorized within Level 3 are measured at cost as they do not have a quoted market price in an active market and as their fair value cannot be reliably measured.

### 2) Financial liabilities

Financial liabilities	Account	December 31, 2017		December 31, 2016	
		Carrying amount	Fair value	Carrying amount	Fair value
Financial liabilities at FVTPL	Derivative liabilities for trading	₩ 1,835,613	₩ 1,835,613	₩ 3,629,082	₩ 3,629,082
Derivative financial liabilities designated as hedging instruments	Derivative financial liabilities designated as hedging instruments	-	-	228,341	228,341
Financial liabilities measured at amortized cost	Trade payables	310,283,177	310,283,177	306,930,556	306,930,556
	Borrowings	-	-	52,154,547	52,154,547
	Other accounts payable	75,111,832	75,111,832	51,704,115	51,704,115
	Accrued expenses	70,680,108	70,680,108	61,177,741	61,177,741
	Dividend payables	494	494	1,905	1,905
	Deposits received	1,834,064	1,834,064	261,438	261,438
	Long-term borrowings	449,124,837	444,392,477	399,338,390	398,871,403
	Subtotal	907,034,512	902,302,152	871,568,692	871,101,705
	Total	₩908,870,125	₩ 904,137,765	₩875,426,115	₩874,959,128

## 6. CASH AND CASH EQUIVALENTS:

Cash and cash equivalents in the separate statements of cash flows are equivalent to cash and cash equivalents in the separate statements of financial position. Details of cash and cash equivalents as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

Description	December 31, 2017	December 31, 2016
Cash on hand	₩ 9,757	₩ 3,210,796
Bank deposits	180,316,658	223,098,575
Other cash equivalents	-	2,500
Total	₩ 180,326,415	₩ 226,311,871

## 7. TRADE AND OTHER RECEIVABLES:

(1) Details of trade and other receivables before deducting accumulated impairment losses as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

### 1) December 31, 2017

	Receivables neither impaired nor overdue	Overdue, but not impaired receivables	Impaired receivables	Total
Trade receivables	₩ 592,184,636	₩ 71,006,582	₩ 18,506,381	₩ 681,697,599
Other accounts receivable and others	29,651,099	9,778,984	14,678,387	54,108,470
Total	₩ 621,835,735	₩ 80,785,566	₩ 33,184,768	₩735,806,069

### 2) December 31, 2016

	Receivables neither impaired nor overdue	Overdue, but not impaired receivables	Impaired receivables	Total
Trade receivables	₩ 518,511,309	₩ 51,580,344	₩ 10,623,602	₩ 580,715,255
Other accounts receivable and others	32,744,518	10,158,680	15,413,797	58,316,995
Total	₩ 551,255,827	₩ 61,739,024	₩ 26,037,399	₩ 639,032,250

(2) Aging of overdue, but not impaired trade and other receivables, as of December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	December 31, 2017	December 31, 2016
1 day–29 days	₩ 21,386,572	₩ 17,117,041
30 days–60 days	6,500,918	5,348,513
61 days–90 days	5,055,139	1,181,369
91 days–120 days	8,193,895	635,953
More than 120 days	39,649,042	37,456,148
Total	₩ 80,785,566	₩ 61,739,024

- (3) Changes in accumulated impairment losses for the years ended December 31, 2017 and 2016, are as follows  
(Unit: Korean won in thousands):

Description	Year ended December 31, 2017		Year ended December 31, 2016	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Beginning balance	₩ 10,517,219	₩ 15,136,326	₩ 9,432,724	₩ 14,349,568
Impairment loss	8,363,029	-	1,331,346	786,758
Reversal of Impairment loss	-	(459,293)	-	-
Disposals of accounts receivable	(319,033)	-	(246,851)	-
Changes due to business disposal	(83,503)	(1,889)	-	-
Ending balance	₩ 18,477,712	₩ 14,675,144	₩ 10,517,219	₩ 15,136,326

- (4) Aging of impaired trade and other receivables as of December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	December 31, 2017	December 31, 2016
Less than seven months	₩ 761,603	₩ 995,753
7 months–12 months	255,997	947,027
More than one year	32,167,169	24,094,619
Total	₩ 33,184,769	₩ 26,037,399

## 8. INVENTORIES:

- (1) Inventories as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

Description	December 31, 2017		
	Acquisition cost	Carrying amount	Valuation allowance
Merchandise	₩ 36,845,200	₩ (1,502,340)	₩ 35,342,860
Finished goods	-	-	-
Work in progress	-	-	-
Raw materials	-	-	-
Other inventories	-	-	-
Total	₩ 36,845,200	₩ (1,502,340)	₩ 35,342,860

  

Description	December 31, 2016		
	Acquisition cost	Carrying amount	Valuation allowance
Merchandise	₩ 21,315,518	₩ (1,911,049)	₩ 19,404,469
Finished goods	9,030,001	(4,783,143)	4,246,858
Work in progress	3,725,773	(944,485)	2,781,288
Raw materials	8,121,444	(2,657,566)	5,463,878
Other inventories	3,747,459	(103,145)	3,644,314
Total	₩ 45,940,195	₩ (10,399,388)	₩ 35,540,807



(2) Details of inventory costs for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	2017	2016
Inventory costs recognized in cost of sales	₩ 2,059,355,653	₩ 1,844,745,905
Inventory costs recognized in discontinued operations	61,439,486	80,075,623
Inventory costs recognized in loss on valuation	-	1,363,334
The loss on valuation of inventory, which was included in the cost of sales	408,708	-

## 9. OTHER ASSETS:

Details of other assets as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	December 31, 2017		December 31, 2016	
	Current	Non-current	Current	Non-current
Advance payments	₩ 11,903,820	₩ 9,531	₩ 34,055,986	₩ 131,289
Prepaid expenses	12,592,448	2,706,105	9,623,889	3,242,676
Prepaid value-added tax	735,157	-	956,706	-
Due from customers for contract work	112,196,076	-	128,020,310	-
	<u>₩ 137,427,501</u>	<u>₩ 2,715,636</u>	<u>₩ 172,656,891</u>	<u>₩ 3,373,965</u>

# **10. PROPERTY, PLANT AND EQUIPMENT:**

(1) Composition of the Company's property, plant and equipment as of December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

## 1) December 31, 2017

	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Others	Total
Acquisition cost	₩89,237,696	₩308,451,638	₩ 537,078	₩ 44,324	₩ 33,605	₩ 4,708	₩ 88,226,730	₩173,331,828	₩381,852,541	₩1,041,720,148
Accumulated depreciation	-	(68,806,540)	(125,829)	(16,359)	(9,801)	(3,200)	(46,264,889)	-	(282,806,699)	(398,033,317)
Accumulated impairment loss	-	-	-	-	-	-	-	-	(61,250)	(61,250)
Government subsidies	-	(945,194)	-	-	-	-	-	-	(160,200)	(1,105,394)
Total	<u>₩89,237,696</u>	<u>₩238,699,904</u>	<u>₩ 411,249</u>	<u>₩ 27,965</u>	<u>₩ 23,804</u>	<u>₩ 1,508</u>	<u>₩ 41,961,841</u>	<u>₩173,331,828</u>	<u>₩ 98,824,392</u>	<u>₩ 642,520,187</u>

## 2) December 31, 2016

	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Others	Total
Acquisition cost	₩99,836,167	₩314,712,131	₩ 853,811	₩ 1,163,257	₩ 46,307	₩ 24,700,420	₩74,905,570	₩ 98,030,004	₩378,988,649	₩993,236,316
Accumulated depreciation	-	(62,688,665)	(177,331)	(544,297)	(12,902)	(16,616,923)	(40,155,560)	-	(261,220,220)	(381,415,898)
Accumulated impairment loss	-	-	-	(918)	-	(1,347,974)	-	(246,160)	-	(1,595,052)
Government subsidies	-	(978,575)	-	-	-	-	(178)	-	(317,346)	(1,296,099)
Total	<u>₩ 99,836,167</u>	<u>₩251,044,891</u>	<u>₩ 676,480</u>	<u>₩ 618,042</u>	<u>₩ 33,405</u>	<u>₩ 6,735,523</u>	<u>₩34,749,832</u>	<u>₩ 97,783,844</u>	<u>₩117,451,083</u>	<u>₩608,929,267</u>

(2) Changes in property, plant and equipment for the years ended December 31, 2017 and 2016, are as follows  
(Unit: Korean won in thousands):

1) Year ended December 31, 2017

	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Others	Total
Beginning balance	₩99,836,167	₩251,044,891	₩ 676,480	₩ 618,042	₩33,405	₩ 6,735,523	₩ 34,749,832	₩ 97,783,844	₩ 117,451,083	₩608,929,267
Acquisition	-	1,158,528	-	-	-	2,221,948	2,537,899	112,612,675	25,920,014	144,451,064
Disposals	(1,485,063)	(1,789,596)	(11,372)	(568,587)	-	(1,340,055)	(101,331)	-	(268,333)	(5,564,337)
Depreciation (*)	-	(10,022,930)	(14,175)	(21,490)	(9,601)	(2,336,107)	(8,174,811)	-	(46,202,575)	(66,781,689)
Impairment loss (*)	(3,588,350)	(7,343,113)	(57,914)	-	-	(5,279,801)	(152,883)	-	(364,956)	(16,787,017)
Transfers	(5,525,058)	5,652,124	(181,770)	-	-	-	13,095,799	(37,064,691)	2,303,210	(21,720,386)
government subsidies	-	-	-	-	-	-	-	-	(14,051)	(14,051)
Others	-	-	-	-	-	-	7,336	-	-	7,336
Ending balance	<u>₩89,237,696</u>	<u>₩238,699,904</u>	<u>₩ 411,249</u>	<u>₩ 27,965</u>	<u>₩ 23,804</u>	<u>₩ 1,508</u>	<u>₩ 41,961,841</u>	<u>₩173,331,828</u>	<u>₩ 98,824,392</u>	<u>₩642,520,187</u>

(\*) Depreciation expense of ₩2,833,785 thousand and impairment loss of ₩16,723,287 thousand that are reclassified as discontinued operations are included.

2) Year ended December 31, 2016

	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Others	Total
Beginning balance	₩99,525,039	₩242,137,228	₩ 650,528	₩ 718,937	₩2,640	₩ 7,943,129	₩ 33,131,893	₩ 48,329,131	₩ 144,654,840	₩577,093,365
Acquisition	75,775	3,130,475	52,800	-	34,005	1,642,956	5,545,879	73,315,245	19,051,947	102,849,082
Business combination (*)	735,166	280,516	5	54,457	47,682	2,377	39,158	-	-	1,159,361
Disposals	(499,813)	(1,493,367)	-	(11,346)	(47,142)	(1,056)	(47,882)	(1,687,280)	(37,555)	(3,825,441)
Depreciation (*)	-	(9,706,621)	(26,853)	(101,570)	(3,780)	(2,569,848)	(8,032,896)	-	(47,265,782)	(67,707,350)
Impairment loss	-	-	-	(42,436)	-	(282,035)	(5,557)	(246,160)	-	(576,188)
Transfers	-	17,296,660	-	-	-	-	4,244,880	(21,848,480)	306,940	-
Others	-	(600,000)	-	-	-	-	(125,643)	(78,612)	740,693	(63,562)
Ending balance	<u>₩99,836,167</u>	<u>₩251,044,891</u>	<u>₩ 676,480</u>	<u>₩ 618,042</u>	<u>₩ 33,405</u>	<u>₩ 6,735,523</u>	<u>₩ 34,749,832</u>	<u>₩ 97,783,844</u>	<u>₩ 117,451,083</u>	<u>₩608,929,267</u>

(\*)1 The Company had agreed for the merger of Oneseen Skytech for the year ended December 31, 2016 (Note 35).

(\*)2 ₩3,261,062 thousand that reclassified as discontinued operations are included

(3) Government subsidies

Changes in government subsidies for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2017

	Buildings	Furniture and fixtures	Others	Total
Beginning balance	₩ 978,575	₩ 178	₩ 317,346	₩ 1,296,099
Offsetting depreciation	-	-	14,051	14,051
Disposal	(33,381)	(178)	(171,197)	(204,756)
Ending balance	<u>₩ 945,194</u>	<u>₩ -</u>	<u>₩ 160,200</u>	<u>₩ 1,105,394</u>

2) Year ended December 31, 2016

	Buildings	Furniture and fixtures	Others	Total
Beginning balance	₩1,011,957	₩ 18,433	₩ 522,648	₩ 1,553,038
Offsetting depreciation	(33,382)	(9,705)	(205,302)	(248,389)
Disposal	-	(8,550)	-	(8,550)
Ending balance	<u>₩ 978,575</u>	<u>₩ 178</u>	<u>₩ 317,346</u>	<u>₩ 1,296,099</u>

(4) Composition of disposal for the years ended December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2017

	Land	Buildings	Structures	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Others	Total
Book value before disposal	₩ 1,485,063	₩ 1,789,596	₩ 11,372	₩ 568,587	₩ --	₩ 1,340,055	₩ 101,331	₩ -	₩268,333	₩5,564,337
Disposal amount	1,863,394	1,806,351	11,422	31,790	-	1,269,157	50,986	-	508,340	5,541,440
Gain (loss) on disposal	<u>₩ 378,331</u>	<u>₩ 16,755</u>	<u>₩ 50</u>	<u>₩ (536,797)</u>	<u>₩ --</u>	<u>₩ (70,898)</u>	<u>₩ (50,345)</u>	<u>₩ -</u>	<u>₩240,007</u>	<u>₩ (22,897)</u>

2) Year ended December 31, 2016

	Land	Buildings	Machinery	Vehicles	Tools and equipment	Furniture and fixtures	Construction in progress	Others	Total
Book value before disposal	₩ 499,813	₩ 1,493,367	₩ 11,346	₩ 47,142	₩ 1,056	₩ 47,882	₩ 1,687,280	₩ 37,555	₩ 3,825,441
Disposal amount	1,805,000	1,103,119	5,701	24,981	339	14,092	1,687,280	578,998	5,219,510
Gain (loss) on disposal	<u>₩ 1,305,187</u>	<u>₩ (390,248)</u>	<u>₩ (5,645)</u>	<u>₩ (22,161)</u>	<u>₩ (717)</u>	<u>₩ (33,790)</u>	<u>₩ -</u>	<u>₩ 541,443</u>	<u>₩ 1,394,069</u>

# 11. INVESTMENT PROPERTY:

(1) Details of investment property as of December 31, 2017, are as follows (Unit: Korean won in thousands):

	Land	Buildings	Structures	Total
Beginning acquisition cost	₩ 6,186,167	₩ 22,419,813	₩ 203,361	₩ 28,809,341
Accumulated depreciation	-	(3,986,398)	(28,007)	(4,014,405)
Ending balance	₩ 6,186,167	₩ 18,433,415	₩ 175,354	₩ 24,794,936

(2) Changes in investment property for the year ended December 31, 2017, are as follows (Unit: Korean won in thousands):

	Land	Buildings	Structures	Total
Beginning balance	₩ 661,109	₩ 2,805,428	₩ 6,192	₩ 3,472,729
Depreciation	-	(385,571)	(12,608)	(398,179)
Transfers	5,525,058	16,013,558	181,770	21,720,386
Ending balance	₩ 6,186,167	₩ 18,433,415	₩ 175,354	₩ 24,794,936

(3) Details of investment property as of December 31, 2017, are as follows (Unit: Korean won in thousands):

	Date of revaluation	Land	December 31, 2017 Buildings and structures	Total
Incheon IT Center (*1)		₩ 3,352,192	₩ 13,448,570	₩ 16,800,762
Sangam DDMC (*2)		₩ 13,461,407	₩ 38,852,862	₩ 52,314,269
Incheon IT Center (*3,4)	2009-01-01	₩ 15,391,110	₩ 9,169,094	₩ 24,560,204
Sangam DDMC (*3,4)	2014-10-01	₩ 260,635,000		₩ 260,635,000

(\*1) Includes the value of investment property occupied by the owner (land: ₩2,691,083 thousand, buildings and structures: ₩10,802,839 thousand).

(\*2) Includes the value of investment property occupied by the owner (land: ₩7,936,349 thousand, buildings and structures: ₩22,906,214 thousand).

(\*3) This is the valuation amount for entire Incheon IT Center and Sangam DDMC. In case of Sangam DDMC, the total value of real estate includes land and buildings and constructions. The appraisal amount distributed as the share of area is ₩78,190,500 thousand.

(\*4) Fair value assessment was performed by an independent third party, Nara Appraisal Co., Ltd., Samchang Appraisal Co., Ltd., and Daeil Appraisal Board, which used an average-costing approach and cost approach method of standard appraised value of land and buildings. The changes in fair value between the date of the assessment and the end of the reporting period are not determined significant, and therefore, fair value reassessment was not performed as of December 31, 2017.

## 12. INTANGIBLE ASSETS:

(1) Composition of the Company's intangible assets as of December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

### 1) December 31, 2017

	Development costs	Industrial property rights	Computer software and others	Membership	Goodwill	Construction in progress	Total
Acquisition cost	₩21,830,441	₩ 1,274,992	₩66,968,196	₩27,354,850	₩ 4,833,374	₩7,325,295	₩129,587,148
Accumulated depreciation	(17,701,506)	(262,291)	(55,475,516)	-	-	-	(73,439,313)
Accumulated impairment loss	(2,605,971)	(1,307)	-	(2,683,861)	(4,833,374)	-	(10,124,513)
Government subsidies	-	-	(122,454)	-	-	-	(122,454)
Total	₩ 1,522,964	₩ 1,011,394	₩11,370,226	₩24,670,989	₩ -	₩7,325,295	₩ 45,900,868

### 2) December 31, 2016

	Development costs	Industrial property rights	Computer software and others	Membership	Goodwill	Construction in progress	Total
Acquisition cost	₩26,921,255	₩ 5,194,754	₩69,405,841	₩28,812,668	₩ 5,352,630	₩12,786,606	₩148,473,754
Accumulated amortization	(20,595,252)	(2,810,780)	(55,686,058)	-	-	-	(79,092,090)
Accumulated impairment loss	(2,605,971)	-	-	(3,305,915)	(4,833,374)	(12,446,511)	(23,191,771)
Government subsidies	-	-	(272,138)	-	-	-	(272,138)
Total	₩ 3,720,032	₩ 2,383,974	₩13,447,645	₩25,506,753	₩ 519,256	₩ 340,095	₩ 45,917,755

(2) Changes in intangible assets for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands)

### 1) For the year ended December 31, 2017

	Development costs	Industrial property rights	Computer software	Membership	Goodwill	Construction in progress	Total
Beginning balance	₩3,720,032	₩2,383,974	₩13,447,645	₩25,506,753	₩ 519,256	₩ 340,095	₩45,917,755
Acquisition	-	1,741	3,374,338	394,492	-	6,985,200	10,755,771
Disposals	(181,479)	(297,525)	(36,734)	(1,230,256)	(519,256)	-	(2,265,250)
Impairment loss (*)	(197,977)	(1,509,594)	(77,567)	-	-	-	(1,785,138)
Amortization (*)	(1,817,612)	(375,865)	(5,354,170)	-	-	-	(7,547,647)
Others	-	808,663	35,314	-	-	-	843,977
Government subsidies	-	-	(18,600)	-	-	-	(18,600)
Ending balance	₩1,522,964	₩1,011,394	₩11,370,226	₩24,670,989	₩ -	₩7,325,295	₩45,900,868

(\*) Included in the reclassified amounts as discontinued operations (amortization: ₩8,973 thousand, impairment loss: ₩1,583,753 thousand).

2) For the year ended December 31, 2016

	Development costs	Industrial property rights	Computer software	Membership	Goodwill	Construction in progress	Total
Beginning balance	₩ 6,439,700	₩ 1,873,256	₩16,489,552	₩26,929,901	₩ 519,256	₩ 205,251	₩52,456,916
Acquisition	-	-	2,692,445	634,133	-	341,175	3,667,753
Disposals	-	-	(101,632)	(1,167,281)	-	-	(1,268,913)
Mergers (*1)	-	-	93,729	-	-	-	93,729
Impairment loss	-	-	-	(890,000)	-	(206,331)	(1,096,331)
Government subsidies	-	-	(27,100)	-	-	-	(27,100)
Amortization (*2)	(2,719,668)	(338,309)	(5,777,822)	-	-	-	(8,835,799)
Others	-	849,027	78,473	-	-	-	927,500
Ending balance	<u>₩3,720,032</u>	<u>₩2,383,974</u>	<u>₩13,447,645</u>	<u>₩25,506,753</u>	<u>₩ 519,256</u>	<u>₩ 340,095</u>	<u>₩45,917,755</u>

(\*1) The Company had agreed for the merger with Oneseen Skytech for the year ended December 31, 2016. (Note 35)

(\*2) ₩156,916 thousand that reclassified as discontinued operations are included.

(3) Government subsidies

Changes in government subsidies for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
	Computer software	Computer software
Beginning balance	₩ 272,138	₩ 535,361
Receipt	18,600	27,100
Offsetting amortization	(168,284)	(290,323)
Ending balance	<u>₩ 122,454</u>	<u>₩ 272,138</u>

(4) Composition of disposal for the years ended December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

1) Year ended December 31, 2017

	Developme nt costs	Industrial property rights	Software	Membership	Goodwill	Total
Book value before disposal	₩ 181,479	₩ 297,525	₩36,734	₩1,230,256	₩ 519,256	₩2,265,250
Disposal amount	-	296,174	14,959	1,175,000	-	1,486,133
Loss on disposal	₩(181,479)	₩ (1,351)	₩ (21,775)	₩ (55,256)	₩(519,256)	₩(779,117)

2)Year ended December 31, 2016

	Software	Membership	Total
Book value before disposal	₩ 101,632	₩ 1,167,281	₩ 1,268,913
Disposal amount	39,846	1,002,364	1,042,210
Loss on disposal	₩ (61,786)	₩ (164,917)	₩ (226,703)

(5) The expenses related to research and development for the years ended December 31, 2017 and 2016, are ₩24,147,829 thousand and ₩25,774,918 thousand, respectively. Those amounts are recognized in selling and administrative expenses. Those amounts include the discontinued operations (2017: ₩7,385,091 thousand, 2016: ₩12,496,698 thousand).



### 13. INVESTMENTS IN SUBSIDIARIES:

(1) Composition of the Company's investments in subsidiaries as of December 31, 2017 and 2016, is as follows:

Companies	Location of incorporation	Major operation	Closing date	Number of shares owned by the Company	Number of shares issued	Percentage of ownership (%) 2017	Percentage of ownership (%) 2016
LG CNS PHILIPPINES, INC.	Philippines	Services	December 31	298,083	298,083	100.00%	100.00%
LG CNS China Inc. (*1)	China	Services	December 31	-	-	100.00%	100.00%
LG CNS Europe B.V.	Netherlands	Services	December 31	5,000	5,000	100.00%	100.00%
LG CNS America, Inc.	USA	Services	December 31	100	100	100.00%	100.00%
LG CNS India Pvt. Ltd.	India	Services	December 31	15,319,725	15,319,725	100.00%	100.00%
PT LG CNS Indonesia	Indonesia	Services	December 31	20,000	20,000	100.00%	100.00%
Entrue Brasil Servicos de T.I. Ltda.	Brazil	Services	December 31	1,671,000	1,671,000	100.00%	100.00%
UCESS PHILIPPINES, INC.	Philippines	Services	December 31	450,000	450,000	100.00%	100.00%
Biztech Partners Co., Ltd (formerly known as BNE Partners Co., Ltd (*5))	South Korea	Services	December 31	12,510,179	13,045,007	95.90%	91.53%
LG N-Sys Co., Ltd.	South Korea	Product/sale	December 31	1,520,000	1,520,000	100.00%	100.00%
Korea Elecom	South Korea	Product/sale	December 31	7,870,990	8,380,000	93.93%	93.93%
SBI-LG Systems Co., Ltd.	Japan	Services	December 31	4,998	9,800	51.00%	51.00%
LG CNS COLOMBIA SAS	Colombia	Services	December 31	110,000	110,000	100.00%	100.00%
LG CNS MALAYSIA SDN BHD	Malaysia	Services	December 31	1,500,002	1,500,002	100.00%	100.00%
LG CNS Saudi Arabia LLC	Saudi Arabia	Services	December 31	3,060	6,000	51.00%	51.00%
LG CNS JAPAN Co., Ltd.	Japan	Services	December 31	800	800	100.00%	100.00%
LG CNS Chile Ltda. (*4)	Chile	Services	December 31	-	-	-	-
LG CNS UZBEKISTAN, LLC (*2)	UZBEKISTAN	Services	December 31	-	-	51.00%	51.00%
Hangbokmaru Co., Ltd.	South Korea	Services	December 31	140,000	140,000	100.00%	100.00%
LG CNS Vietnam Co., Ltd. (*3)	Vietnam	Services	December 31	-	-	100.00%	-
Biztech Co., Ltd. (*5,6)	South Korea	Services	December 31	-	-	-	100.00%

(\*1) There are no outstanding shares based on the relevant laws and regulations of local country an entity formed in China.

(\*2) There are no outstanding shares based on the relevant laws and regulations of local country an entity formed in UZBEKISTAN.

(\*3) In the current period, it was established and there are no outstanding shares based on the relevant laws and regulations of local country an entity formed in VIETNAM.

(\*4) In the current period, it was liquidated.

(\*5) On January 1, 2017, BNE Partners, Inc. (surviving corporation) merged with Biztech partners Co., Ltd. and changed its name to Biztech partners Co., Ltd. As a result of the merger, the number of shares and stake held by the Company increased due to the new share issue.

(\*6) In the prior period, it was acquired as a newly divided corporation of Ucess Partners Co., Ltd. and merged by Biztech Partners Co., Ltd (formerly, known as BNE Partners Co., Ltd) as of January 1, 2017.

(2) Changes in investments in subsidiaries for the years ended December 31, 2017 and 2016, are as follows  
(Unit: Korean won in thousands):

1) For the year ended December 31, 2017

Companies	Beginning balance	Acquisitio n	Transfer	Impairment loss	Ending balance
LG CNS PHILIPPINES, INC.	₩ -	₩ -	₩ -	₩ -	₩ -
LG CNS China Inc.	23,231,647	-	-	-	23,231,647
LGCNS Europe B.V.	3,656,950	-	-	-	3,656,950
LG CNS America, Inc.	2,883,494	-	-	-	2,883,494
LG CNS India Pvt, Ltd.	795,429	-	-	-	795,429
PT LG CNS Indonesia	1,220,095	-	-	-	1,220,095
Entrue Brasil Servicos de T.I. Ltda.	1,556,532	-	-	-	1,556,532
UCESS PHILIPPINES, INC.	102,553	-	-	-	102,553
Biztech Partners Co., Ltd (formerly, known as BNE Partners Co., Ltd (*5))	6,149,795	-	5,919,780	-	12,069,575
LG N-Sys Co., Ltd.	61,856,873	-	-	-	61,856,873
Korea Elecom	-	-	-	-	-
SBI-LG Systems Co., Ltd.	3,437,225	-	-	(1,019,589)	2,417,636
LG CNS COLOMBIA SAS	690,134	-	-	-	690,134
LG CNS MALAYSIA SDN BHD	559,250	-	-	-	559,250
LG CNS Saudi Arabia LLC	-	-	-	-	-
LG CNS JAPAN Co., Ltd.	418,032	-	-	-	418,032
LG CNS UZBEKISTAN, LLC	1,162,524	-	-	-	1,162,524
Hangbokmaru Co., Ltd.	700,000	-	-	-	-
Biztech partners Co., Ltd.	4,042,210	-	(4,042,210)	-	-
LG CNS Vietnam Co., Ltd.	-	233,340	-	-	233,340
Total	₩112,462,743	₩233,340	₩1,877,570	₩(1,019,589)	₩113,554,064

2) For the year ended December 31, 2016:

Companies	Beginning balance	Acquisitio n	Transfer	Disposal	Impairment loss	Ending balance
LG CNS PHILIPPINE S, INC.	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
LG CNS China Inc.	23,231,647	-	-	-	-	23,231,647
LGCNS Europe B.V.	3,656,950	-	-	-	-	3,656,950
LG CNS America, Inc.	2,883,494	-	-	-	-	2,883,494
LG CNS India Pvt, Ltd.	795,429	-	-	-	-	795,429
PT LG CNS Indonesia	1,220,095	-	-	-	-	1,220,095
Entrue Brasil Servicos de T.I. Ltda.	1,556,532	-	-	-	-	1,556,532
UCESS PHILIPPINE S, INC.	102,553	-	-	-	-	102,553
BNE Partners Co., Ltd.	3,973,731	2,176,064	-	-	-	6,149,795
Ucess Partners Co., Ltd. (*1)	6,754,760	-	(4,042,210)	(2,712,550)	-	-
LG N-Sys Co., Ltd.	61,856,873	-	-	-	-	61,856,873
Korea Elecom (*2)	-	4,900,521	-	-	(4,900,521)	-
SBI-LG Systems Co., Ltd.	3,437,225	-	-	-	-	3,437,225
LG CNS COLOMBIA SAS	690,134	-	-	-	-	690,134
EverOnCo., Ltd.	2,250,000	1,375,000	-	(1,381,750)	(2,243,250)	-
Oneseen Skytech Co., Ltd.	-	105,739	-	-	(105,739)	-
LG CNS MALAYSIA SDN BHD	559,250	-	-	-	-	559,250
LG CNS Saudi Arabia LLC	542,084	120,936	246,482	-	(909,502)	-
LG CNS JAPAN Co., Ltd.	418,032	-	-	-	-	418,032
LG CNS UZBEKISTA N, LLC	806,126	356,398	-	-	-	1,162,524
Hangbokmaru Co., Ltd.	-	700,000	-	-	-	700,000
Biztech partners Co., Ltd. (*1)	-	-	4,042,210	-	-	4,042,210
Total	<u>₩114,734,915</u>	<u>₩9,734,658</u>	<u>₩ 246,482</u>	<u>₩(4,094,300)</u>	<u>₩(8,159,012)</u>	<u>₩112,462,743</u>

- (\*1) The divided surviving corporation was sold after the division during the year ended December 31, 2016, and established and acquired as a newly divided corporation of Ucess Partners Co., Ltd.
- (\*2) In the prior year, the Company examined the recoverable amount of investment with signs of impairment that comes from the cumulative loss. The Company recognized an impairment loss of ₩4,900,521 thousand. The recoverable amount is determined based on value in use, and applicable discount rate for measuring the value in use is 13.2% a year.

#### 14. INVESTMENTS IN ASSOCIATES AND JOINT VENTURES:

(1) Composition of the Company's investments in associates and jointly controlled entity as of December 31, 2017 and 2016, is as follows:

Companies	Location of incorporation	Major business activities	Closing date	Number of shares owned by the Company		Number of issued shares		Percentage of ownership (%), 2017		Percentage of ownership (%), 2016	
				Common stock	Preferred stock	Common stock	Preferred stock				
Korea Smart Card Co., Ltd.	South Korea	System software development and supply	December 31	3,927,167	-	11,934,085	-	32.91	₩21,598,660	32.91	₩21,598,660
Songdo U-Life LLC (*1)	South Korea	Health care, integrated wireless environment, integrated smart cards and building management	December 31	5,880	-	35,880	-	16.39	4,507,299	16.39	4,507,299
RECAUDO BOGOTA S.A.S.	Colombia	Public system development and service	December 31	2,126	-	10,630	-	20.00	2,575,022	20.00	5,751,317
Sejong GreenPower Co., LTD (*1)	South Korea	Energy supply	December 31	260,600		1,309,200		19.91	-	19.91	1,303,000
Hellas SmarTicket Societe Anonyme	Greece	Public system development and service	December 31	22,500		75,000		30.00	2,843,358	30.00	2,843,358
Ulleungdo Natural Energy Co., Ltd.	South Korea	New renewable energy supply	December 31	1,600,000		5,360,000		29.85	8,000,000	29.85	8,000,000
Daegu Natural Energy Co., Ltd.	South Korea	power plant construction	December 31	25,000		100,000		25.00	125,000	25.00	125,000
KEPCO-LG CNS Mangilao Holdings LLC (*2)	USA	New renewable energy supply	December 31	-		-		-	-	-	-
									₩39,649,339		₩44,128,634

(\*1) The Company has significant influence since contractual right exists to appoint one member of board even though the percentage of ownership is less than 20%.

(\*2) Although it was established during the current term, there are no outstanding shares since it is before the payment of investment capital.

(2) Changes in investments in associates and jointly controlled entity for the years ended December 31, 2017 and 2016, are as follows: (Unit: Korean won in thousands)

1) For the year ended December 31, 2017

Companies	Beginning balance	Disposals	Ending balance
Korea Smart Card Co., Ltd.	₩ 21,598,660	₩ -	₩ 21,598,660
Songdo U-Life LLC	4,507,299	-	4,507,299
RECAUDO BOGOTA S.A.S.	5,751,317	(3,176,295)	2,575,022
Sejong Green Power Co., Ltd.	1,303,000	(1,303,000)	-
Hellas SmarTicket Societe Anonyme	2,843,358	-	2,843,358
Ulleungdo Natural Energy Co., Ltd.	8,000,000	-	8,000,000
Daegu Natural Energy Co., Ltd.	125,000	-	125,000
Total	<u>₩ 44,128,634</u>	<u>₩ (4,479,295)</u>	<u>₩ 39,649,339</u>

2) For the year ended December 31, 2016

Companies	Beginning balance	Acquisition	Transfers	Disposals	Ending balance
Korea Smart Card Co., Ltd.	₩ 21,598,660	₩ -	₩ -	₩ -	₩ 21,598,660
Songdo U-Life LLC	4,507,299	-	-	-	4,507,299
RECAUDO BOGOTA S.A.S.	5,751,317	-	-	-	5,751,317
Petro Cornergy Co., Ltd. (*)	429,975	-	(214,987)	(214,988)	-
Sejong Green Power Co., Ltd.	1,303,000	-	-	-	1,303,000
Hellas SmarTicket Societe Anonyme	1,374,198	1,469,160	-	-	2,843,358
Ulleungdo Natural Energy Co., Ltd.	8,000,000	-	-	-	8,000,000
Daegu Natural Energy Co., Ltd.	-	125,000	-	-	125,000
Total	<u>₩ 42,964,449</u>	<u>₩ 1,594,160</u>	<u>₩ (214,987)</u>	<u>₩ (214,988)</u>	<u>₩ 44,128,634</u>

(\*) Reclassified from investments in associates to AFS due to disposal of stock during the year ended December 31, 2016.

# **15. DEBENTURES AND BORROWINGS:**

(1) The Company has no borrowings as of December 31, 2017, and the Company's short-term borrowings (debentures) as of December 31, 2016, consist of the following (Unit: Korean won in thousands):

Type	Creditor	Annual interest rate (%)	December 31, 2017	December 31, 2016
Short-term borrowings	HSBC Qatar	4.63	₩ -	₩ 2,154,547
Ending balance			₩ -	₩ 2,154,547

(2) The Company's long-term borrowings (except for debentures) as of December 31, 2017 and 2016, consist of the following (Unit: Korean won in thousands):

Type	Creditor	Annual interest rate (%)	December 31, 2017	December 31, 2016
Long-term borrowings (*) Facility funds	KEB HANA BANK	1.61-2.90	₩ -	₩ 50,000,000
Ending balance			₩ -	₩ 50,000,000

(\*) It was classified as current long-term borrowings because expiration will be within a year as of December 31, 2016.

(3) The Company's long-term borrowings (debentures) as of December 31, 2017 and 2016, consist of the following (Unit: Korean won in thousands):

Type	Maturity date	Annual interest rate (%)	December 31, 2017	December 31, 2016
5th public offering	2017-03-05	4.15	₩ -	₩ 100,000,000
7th public offering	2018-05-07	2.96	100,000,000	100,000,000
9-1th public offering	2018-04-16	1.88	50,000,000	50,000,000
Unguaranteed public bond 9-2th public offering	2020-04-16	2.07	100,000,000	100,000,000
9-3th public offering	2022-04-16	2.44	50,000,000	50,000,000
10-1th public offering	2020-04-11	2.10	110,000,000	-
10-2th public offering	2022-04-11	2.45	40,000,000	-
Subtotal			450,000,000	400,000,000
Discount on debentures			(875,163)	(661,610)
Current portion of debentures			(149,948,723)	(99,984,453)
Total			₩ 299,176,114	₩ 299,353,937

## 16. PROVISIONS:

(1) Changes in provisions for the years ended December 31, 2017 and 2016, are as follows (Korean won in thousands):

1) For the year ended December 31, 2017

	Beginning balance	Decrease	Reversal	Increase	Others	Ending balance
Provision for construction (product) warranties	₩ 8,028,674	₩ (8,145,145)	₩ (715,158)	₩ 16,224,365	₩ (2,239,506)	₩ 13,153,230
Restoration liabilities (*1)	4,081,035	-	-	612,876	-	4,693,911
Others	31,113,357	(9,434,559)	(1,497,179)	13,307,931	-	33,489,550
Total	₩ 43,223,066	₩ (17,579,704)	₩ (2,212,337)	₩ 30,145,172	₩ (2,239,506)	₩ 51,336,691

(\*1) Increases in valuation of present value for the year ended December 31, 2017, amounting to ₩612,876 thousand are included in an increase of provisions.

2) For the year ended December 31, 2016

	Beginning balance	Decrease	Reversal	Increase	Ending balance
Provision for construction (product) warranties	₩ 8,740,549	₩ (7,526,196)	₩ (2,087,117)	₩ 8,901,438	₩ 8,028,674
Restoration liabilities (*)	3,948,843	(68,352)	-	200,544	4,081,035
Others	17,818,970	(2,966,119)	(2,954,736)	19,215,242	31,113,357
Total	₩ 30,508,362	₩ (10,560,667)	₩ (5,041,853)	₩ 28,317,224	₩ 43,223,066

(\*) Increases in valuation of present value for the year ended December 31, 2016, amounting to ₩200,544 thousand are included in an increase of provisions.

(2) Nature of provision and expected timing for outflow of economic benefits (Unit: Korean won in thousands):

	Within 12 months	After 12 months	Total
Provision for construction (product) warranties (*1)	₩ 13,153,230	₩ -	₩ 13,153,230
Restoration liabilities (*2)	2,818,000	1,875,911	4,693,911
Others	33,489,550	-	33,489,550
Total	₩ 49,460,780	₩ 1,875,911	₩ 51,336,691

(\*1) Estimated provision for construction warranties that would be expected in past service revenue.

(\*2) Measured at present value of future restoration estimation costs on leased assets.



## 17. RETIREMENT BENEFIT PLAN:

### (1) Defined contribution plan

The Company operates a defined contribution plan for employees. Obligation of the Company is to make payments to third-party funds. 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 Company's assets.

The contributions to defined contribution plan for the years ended December 31, 2017 and 2016, are ₩28,880,668 thousand and ₩30,678,440 thousand, respectively. Other accounts payable in relation to defined contribution plans as of December 31, 2017 and 2016, are ₩2,985,392 thousand and ₩2,711,257 thousand, respectively.

### (2) Defined benefit plan

The Company operates a defined benefit plan for employees, and according to the plan, employees will be paid their average salary amount of the final three months multiplied by the number of years vested, adjusted for payment rate and other. The valuations of related plan assets and the defined benefit liability are performed by an independent reputable actuary using the projected unit credit method at its present value, relevant current service cost and past service costs.

1) As of December 31, 2017 and 2016, amounts recognized in the separate statements of financial position related to retirement benefit obligation are as follows (Unit: Korean won in thousands):

	December 31, 2017	December 31, 2016
Present value of defined benefit obligation	₩ 15,263,715	₩ 15,431,140
Fair value of plan assets	(12,413,258)	(13,665,442)
Retirement benefit obligation	<u>₩ 2,850,457</u>	<u>₩ 1,765,698</u>

2) Changes in defined benefit obligation for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Beginning balance	₩ 15,431,140	₩ 17,869,685
Current service cost	1,936,116	2,356,497
Interest cost	328,664	358,943
Actuarial loss (gain)	(973,020)	100,339
Benefits paid	(3,245,195)	(4,615,009)
Transfer to affiliated company	1,786,010	(639,315)
Ending balance	<u>₩ 15,263,715</u>	<u>₩ 15,431,140</u>

- 3) Income and loss related to defined benefit plan for the years ended December 31, 2017 and 2016, are as follows (Korean won in thousands):

Description	Year ended December 31, 2017	Year ended December 31, 2016
Service cost:	₩ 1,936,116	₩ 2,356,497
Current service cost	1,936,116	2,356,497
Net interest on the net defined benefit liability (asset):	39,086	23,435
Interest cost on defined benefit obligation	328,664	358,943
Interest on plan assets	(289,578)	(335,508)
Others	28,211	32,794
Total	₩ 2,003,413	₩ 2,412,726

On the other hand, defined benefit plan gain or loss is allocated to each item as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Amounts included in the retirement benefits	₩ 1,929,032	₩ 2,335,686
Amounts included in the service fee	26,799	31,870
Amounts included in the cost of production	18,016	23,287
Amounts included in income from discontinued operations	29,566	21,883
Total	₩ 2,003,413	₩ 2,412,726

- 4) Changes in plan assets for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Beginning balance	₩ 13,665,442	₩ 16,850,775
Expected return on plan assets	289,578	335,508
Actuarial gain (loss)	(107,909)	(32,134)
Contributions from the employer	-	1,060,000
Transfer to affiliated company	1,839,553	103,692
Other	(28,211)	(32,794)
Benefits paid	(3,245,195)	(4,619,605)
Ending balance	₩ 12,413,258	₩ 13,665,442

- 5) All of the plan assets are invested in financial instruments that guarantee principal and interest rate as of December 31, 2017 and 2016.

- 6) Actuarial assumptions used as of December 31, 2017 and 2016, are as follows:

Description	December 31, 2017	December 31, 2016
Discount rate (%)	2.70	2.21
Expected rate of salary increase (%)	6.00	8.00

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

Description	Center scenario	+ 1%	- 1%
Change in discount rate	₩ 15,263,715	₩ 14,608,226	₩ 15,969,255
Change in rate of salary increase	15,263,715	15,942,317	14,619,889

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

8) Remeasurements related to net defined benefit liability for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

Description	Year ended December 31, 2017	Year ended December 31, 2016
Actuarial gains arising from changes in demographic assumptions	₩ (16,256)	₩ -
Actuarial gains (losses) arising from changes in financial assumptions	(1,793,342)	52,590
Actuarial losses arising from experience	530,299	244,975
Return on plan assets, excluding amounts included in interest income	107,909	32,134
Actuarial losses arising from transfer in/out adjustments	306,279	(197,226)
Total	₩ (865,111)	₩ 132,473

9) Estimated contribution that will be paid in the next fiscal year is as follows (Unit: Korean won in thousands):

	Year ending December 31, 2018
Estimated contributions to plan assets (*)	₩ 1,994,688

(\*) The above estimated contributions to plan assets are estimated based on the assumption that all the other respective assumptions remain unchanged.

## 18. OTHER LIABILITIES:

Other liabilities as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands)

	December 31, 2017		December 31, 2016	
	Current	Non-current	Current	Non-current
Advance receipts	₩ 32,952,505	₩ -	₩ 43,653,602	₩ -
Withholding value-added tax	18,717,116	-	18,367,409	-
Withholdings	27,994,811	-	41,124,194	-
Unearned income	26,576	-	52,894	-
Government subsidies	-	-	18,017	-
Overclaimed construction	39,714,863	-	60,665,816	-
Other long-term employee liabilities	-	7,431,890	-	7,755,863
Total	₩ 119,405,871	₩ 7,431,890	₩ 163,881,932	₩ 7,755,863

## 19. CONSTRUCTION CONTRACTS:

(1) Cost, income or loss and claimed construction from construction in progress as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	December 31, 2017	December 31, 2016
Accumulated costs	₩ 1,376,946,772	₩ 1,210,160,067
Accumulated income	180,156,213	149,902,157
Accumulated loss	(64,648,383)	(63,320,109)
Total of accumulated revenue	1,492,454,602	1,296,742,115
Progress billing	1,419,973,389	1,229,387,621
Due from customers for contract work	112,196,076	128,020,310
Due to customers for contract work	39,714,863	60,665,816

(\*) Advances received from construction contracts amount to ₩21,643,834 thousand and ₩32,691,595 thousand as of December 31, 2017 and 2016, respectively.

(2) For cost-risen factor of construction contract in this year, estimated total contracted cost of current ongoing contract has changed. Due to that, gain and loss between this year and future period and amounts that affect unclaimed construction are listed below. (Unit: Korean won in thousands):

Type	Change in estimated total contracted amount	Change in estimated total contracted cost	Impact on gain and loss of this year	Impact on gain and loss in the future	Change in unclaimed construction
Construction contract (*1)	₩ 38,396,822	₩ 30,260,581	₩ 9,290,240	₩ (1,153,999)	₩ 9,290,240

(\*1) The Company has only one operating segment in accordance with K-IFRS 1108.

(\*2) Contract loss provision liability amounts to ₩1,932,373 thousand for the year ended December 31, 2017.

(3) During the current quarter, following are the details of major contracts in which the amount of contract is 5% or more of the sales amount of the former period as contracts recognizing percentage-of-completion method profit by applying cost-based input method.

	Contract date	Completion period on the contract	Progress rate	Unclaimed construction	Receivables from construction
LG CNS No.01	2010-11-30	2015-11-30	97.66%	₩ 13,434,790	₩ -

## 20. ISSUED CAPITAL:

Details of issued capital as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

Type of stock	Number of authorized shares	Number of issued shares	Number of shares owned by related party	Par value (Korean won)	Amount of issued capital (*)	Amount of capital surplus
Common stock	400,000,000	87,197,353	76,142,992	₩ 500	₩47,198,411	₩46,625,595

(\*) As the Company purchased 7,199,469 shares via tender offer at ₩12,000 per share and had retired them before the prior year, the issued capital and number of issued stocks multiplied by face value are not equal.

## 21. CAPITAL SURPLUS:

Composition of the Company's capital surplus as of December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	December 31, 2017	December 31, 2016
Paid-in capital in excess of par value	₩ 46,625,595	₩ 46,625,595
Gains on sale of treasury stock	454,597	454,597
Other capital surplus	12,440,863	12,440,863
Total	₩ 59,521,055	₩ 59,521,055

## 22. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS):

(1) Details of accumulated other comprehensive income (loss) as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Gain on AFS financial assets	₩ 850,702	₩ 780,658
Loss on AFS financial assets	(664,895)	(501,454)
Valuation losses of derivative instruments for cash flow hedges	-	(173,083)
Ending balance	₩ 185,807	₩ 106,121

(2) Details of accumulated other comprehensive income (loss) as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Beginning balance	₩ 279,204	₩ (678,965)
Changes in net gain on valuation of AFS financial assets	(123,215)	1,264,075
Income tax effect	29,818	(305,906)
Ending balance	₩ 185,807	₩ 279,204

(3) Details of valuation losses of derivative instruments for cash flow hedges as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Beginning balance	₩ (173,083)	₩ (642,455)
Gain or loss from valuation losses of derivative instruments for cash flow hedges	173,083	469,372
Interest swap	228,341	619,224
Tax recognized by valuation losses of derivative instruments for cash flow hedges	(55,258)	(149,852)
Ending balance	₩ -	₩ (173,083)

### 23. RETAINED EARNINGS AND DIVIDENDS:

(1) Details of retained earnings as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Retained earnings with limited disposal (*)	₩ 23,599,206	₩ 23,593,834
Retained earnings without limited disposal	778,112,640	703,909,892
Total	₩ 801,711,846	₩ 727,503,726

(\*) This reserve may only be used to offset against future deficit, if any, or may be transferred to capital stock.

(2) Changes in retained earnings for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Beginning balance	₩ 727,503,726	₩ 652,445,412
Profit for the year	87,939,928	83,004,514
Dividends (*)	(14,387,563)	(7,845,785)
Actuarial gain (loss)	865,111	(132,473)
Related deferred tax	(209,356)	32,058
Ending balance	₩ 801,711,846	₩ 727,503,726

(\*) Details of dividend payments for the years December 31, 2017 and 2016, are as follows.

	Year ended December 31, 2017	Year ended December 31, 2016
Number of issued and outstanding shares	87,197,353	87,175,865
Treasury stock	-	473
Number of dividend shares	87,197,353	87,175,392
Dividend per share (Unit: Korean won)	₩ 165	₩ 90
Total dividends (Unit: Korean won in thousands)	₩ 14,387,563	₩ 7,845,785

(3) Separate statements of appropriations of retained earnings for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands)

	Year ended December 31, 2017	Year ended December 31, 2016
Date of appropriations: March 23, 2017		
UNAPPROPRIATED RETAINED EARNINGS:		
Unappropriated retained earnings carried over from prior year	₩ 669,277,677	₩ 601,666,513
Profit for the year	87,939,928	83,004,514
Actuarial gains and losses on defined benefit plans	655,755	(100,415)
	<u>757,873,360</u>	<u>684,570,612</u>
TRANSFER FROM VOLUNTARY RESERVES:		
Reserves for research and development	-	900,000
	-	(900,000)
APPROPRIATIONS:		
Legal reserve	-	5,372
Dividends	18,311,444	14,387,563
	<u>(18,311,444)</u>	<u>(14,392,935)</u>
UNAPPROPRIATED RETAINED EARNINGS TO BE CARRIED FORWARD TO SUBSEQUENT YEAR	<u>₩ 739,561,916</u>	<u>₩ 669,277,677</u>

## 24. OPERATING INCOME:

Details of operating income for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Sales of merchandise	₩ 388,670,132	₩ 310,177,245
Service revenue	944,963,553	937,452,137
Construction revenue	1,055,018,262	902,957,187
REVENUE	<u>2,388,651,947</u>	<u>2,150,586,569</u>
Cost of merchandise	357,386,985	287,821,803
Service cost	805,203,625	788,710,671
Construction cost	896,765,043	768,243,714
COST OF GOODS SOLD	<u>(2,059,355,653)</u>	<u>(1,844,776,188)</u>
GROSS MARGIN	<u>329,296,294</u>	<u>305,810,381</u>
Salaries and wages	52,865,487	55,833,541
Severance benefits	5,037,342	5,824,000
Welfare	10,196,192	10,550,641
Depreciation	5,091,291	3,867,556
Amortization of intangible assets	1,423,066	1,805,447
Research and development expenses	16,762,738	13,278,220
Commission	5,203,992	4,646,382
Training expenses	3,724,306	2,503,070
Service contract expenses	9,187,566	7,416,931
Rent expense	4,960,569	4,695,515
Bad debt expenses	8,331,536	1,309,996
Increase in provision	(49,123)	1,756,719
Others	30,761,019	39,003,994
SELLING AND ADMINISTRATIVE EXPENSES:	<u>(153,495,981)</u>	<u>(152,492,012)</u>
OPERATING INCOME	<u>₩ 175,800,313</u>	<u>₩ 153,318,369</u>



## 25. CLASSIFICATION OF EXPENSES BY NATURE:

1) For the year ended December 31, 2017 (Unit: Korean won in thousands):

Account	Changes in inventories	Selling and administrative expenses	Manufacturing cost	Total
Changes in inventories:	₩ (5,265,931)	₩ -	₩ 529,722,322	₩ 524,456,391
Finished goods	4,246,858	-	-	4,246,858
Work in process	2,781,288	-	-	2,781,288
Merchandise	(15,938,391)	-	373,325,376	357,386,985
Other inventories	3,644,314	-	156,396,946	160,041,260
Raw material used	-	-	-	-
Employee benefits	-	69,853,466	423,780,276	493,633,742
Depreciation and amortization	-	6,514,357	65,370,437	71,884,794
Commission expenses	-	5,203,992	69,514,457	74,718,449
Lease expenses	-	4,960,569	15,121,827	20,082,396
Outsourcing services	-	9,187,566	520,927,343	530,114,909
Other expenses	-	57,776,031	440,184,922	497,960,953
Total	₩ (5,265,931)	₩ 153,495,981	₩ 2,064,621,584	₩ 2,212,851,634

2) For the year ended December 31, 2016 (Unit: Korean won in thousands):

Account	Changes in inventories	Selling and administrative expenses	Manufacturing cost	Total
Changes in inventories:	₩ 5,572,827	₩ -	₩ 423,410,053	₩ 428,982,880
Finished goods	7,996,841	-	-	7,996,841
Work in process	582,685	-	-	582,685
Merchandise	-	-	-	-
Other inventories	(1,966,973)	-	289,788,775	287,821,802
Raw material used	(1,039,726)	-	133,621,278	132,581,552
Employee benefits	-	83,214,537	416,634,441	499,848,978
Depreciation and amortization	-	5,673,003	67,803,365	73,476,368
Commission expenses	-	4,646,382	53,780,824	58,427,206
Lease expenses	-	4,695,515	15,647,484	20,342,999
Outsourcing services	-	7,416,931	468,284,941	475,701,872
Other expenses	-	46,845,644	393,642,253	440,487,897
Total	₩ 5,572,827	₩ 152,492,012	₩ 1,839,203,361	₩ 1,997,268,200

## 26. FINANCIAL INCOME AND FINANCIAL EXPENSES:

(1) Financial income for the years ended December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Interest income	₩ 3,351,095	₩ 4,095,462
Dividend income	14,128,597	14,938,374
Gain on foreign currency transactions	249,449	1,751,121
Gain on foreign currency translation	17,152	337,352
Gain on disposal of AFS assets	-	21,855
Total	₩ 17,746,293	₩ 21,144,164

(2) Interest income included in financial income for the years ended December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Financial institution deposits	₩ 1,986,628	₩ 2,144,082
AFS financial assets	5	-
Other loans and receivables	1,364,462	1,951,380
Total	₩ 3,351,095	₩ 4,095,462

(3) Financial expenses for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Interest expense	₩ 10,069,996	₩ 14,857,510
Loss on foreign currency transactions	4,562,710	1,565,363
Loss on foreign currency translation	841,922	32,538
Loss on transactions of derivatives	248,630	687,452
Loss on disposal of AFS financial assets	127	9
Impairment loss on AFS financial assets	4,292,996	724
Total	₩ 20,016,381	₩ 17,143,596

(4) Interest expense included in financial expenses for the years ended December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Bank overdrafts and loan interest	₩ 327,590	₩ 904,098
Interest expense on debentures	10,737,204	15,002,018
Other interest expense	1,137,363	203,987
Less: interest expense capitalized (*)	(2,132,161)	(1,252,593)
Total	₩ 10,069,996	₩ 14,857,510

(\*) Capitalization interest rates used for the years ended December 31, 2017 and 2016, are 2.22% and 2.81%, respectively.

**27. OTHER NON-OPERATING INCOME AND EXPENSE:**

Other non-operating income and expenses for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Reversal of other allowances	₩ 459,293	₩ -
Rental income	838,100	402,650
Commission	319,609	252,114
Gains on foreign currency transaction	7,144,619	8,051,239
Gain on foreign currency translation	3,197,870	3,550,157
Gain on disposal of tangible assets	729,056	1,864,724
Gain on transactions of derivatives	-	16,711
Gain on valuation of derivatives	14,364,473	16,900,245
Gain on disposal of investments in associates	1,671,559	1,376,168
Gain on disposal of investments in subsidiaries	1,877,570	487,450
Miscellaneous gain	411,685	368,599
Others	119,163	-
OTHER NON-OPERATING INCOME:	₩ 31,132,997	₩ 33,270,057
Other debt expenses	₩ -	₩ 784,928
Loss on foreign currency transaction	7,349,853	8,263,938
Loss on foreign currency translation	6,196,771	2,076,986
Loss on disposal of tangible assets	691,871	447,034
Loss on impairment of tangible assets	63,731	295,437
Loss on disposal of intangible assets	777,765	243,944
Loss on impairment of intangible assets	201,385	1,096,331
Loss on transactions of derivatives	10,348,352	13,370,819
Loss on valuation of derivatives	1,835,613	3,616,529
Loss on disposal of investments in subsidiaries	-	1,385,750
Loss on disposal of investments in associates	-	39,975
Impairment loss on investments in subsidiaries	1,019,589	8,159,012
Impairment loss on investments in associates	4,479,295	-
Donations and contributions	2,924,026	2,558,620
Others	1,978,399	-
Miscellaneous loss	4,034	4,039
OTHER NON-OPERATING EXPENSES:	₩ (37,870,684)	₩ (42,343,342)

## 28. NET GAINS (LOSSES) ON FINANCIAL INSTRUMENT:

Net gains (losses) on each financial instrument for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Financial assets:		
Financial assets at FVTPL	₩ 16,036,032	₩ 18,283,852
AFS financial assets	(4,335,862)	1,303,769
Loans and receivables (*)	(16,633,236)	4,790,924
Subtotal	(4,933,066)	24,378,545
Financial liabilities:		
Financial liabilities at FVTPL	(12,432,595)	(17,751,924)
Derivative instruments for hedges	173,083	469,372
Financial liabilities measured at amortized cost	(8,206,734)	(15,041,867)
Subtotal	(20,466,246)	(32,324,419)
Total	₩ (25,399,312)	₩ (7,945,874)

(\*) Net gain or loss arising from cash and cash equivalents is included.

## 29. INCOME TAX:

(1) Composition of income tax expense for the years ended December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Current income tax payable	₩ 34,309,692	₩ 39,684,589
Adjustment relating to prior income tax expense	939,832	13,452,811
Tax expenses related to the variation of temporary difference:	14,615,569	(14,100,212)
Beginning deferred tax assets due to temporary differences	55,919,312	42,242,800
Ending deferred tax assets due to temporary differences	41,068,947	55,919,312
Tax effect related to the change in other comprehensive income (loss)	(234,796)	(423,700)
Income tax expense	₩ 49,865,093	₩ 39,037,188
continuing operations	60,083,291	47,418,983
discontinued operations	(10,218,198)	(8,381,795)

- (2) Reconciliation between accounting income and income tax expense of the Company for the years ended December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Profit before income tax expense from continuing operations	₩ 166,792,538	₩ 148,245,652
Profit before income tax expense from discontinued operations	(28,987,517)	(26,203,950)
<b>Income before income tax expense</b>	<b>₩ 137,805,021</b>	<b>₩ 122,041,702</b>
Tax at the applicable tax rate	29,897,105	26,429,174
Adjustments:	19,967,988	12,608,014
Non-taxable income	(1,303,985)	(1,008,238)
Non-deductible expense	1,338,425	1,723,782
Adjustment relating to prior income tax expense	939,832	13,452,811
Effect of tax credit and exemption	(3,543,624)	(3,628,904)
Temporary difference not recognized as deferred tax assets.	1,225,905	1,078,115
Others	21,311,435	990,448
<b>Income tax expense</b>	<b>₩ 49,865,093</b>	<b>₩ 39,037,188</b>

- (3) Income tax directly reflected in equity for the years ended December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Revenues and expense related to the change in other comprehensive income (loss):		
Valuation of AFS financial assets	₩ 29,818	₩ (305,906)
Actuarial valuation under defined benefit plans	(209,356)	32,058
Derivative instruments for cash flow hedges	(55,258)	(149,852)
<b>Total deferred tax directly reflected in equity</b>	<b>₩ (234,796)</b>	<b>₩ (423,700)</b>

(4) Changes in deferred tax assets (liabilities) for the years ended December 31, 2017 and 2016, are as follows  
(Unit: Korean won in thousands):

1) For the year ended December 31, 2017 (Unit: Korean won in thousands):

	Beginning balance	Reflected in income (loss)	Reflected in equity	Ending balance
Temporary differences:				
Valuation of derivative instruments	₩ 600,464	₩ (516,178)	₩ (55,258)	₩ 29,028
Property, plant and equipment	4,083,582	393,683	-	4,477,265
Investments in subsidiaries/associates	781,316	876,358	-	1,657,674
Intangible assets	4,502,303	(3,348,293)	-	1,154,010
AFS financial assets	821,570	1,457,585	29,818	2,308,973
Accrued expense	6,217,602	651,279	-	6,868,881
Provisions	21,379,913	804,442	(209,356)	21,974,999
Doubtful receivable	98,863	25,853	-	124,716
Government subsidies	383,874	(86,735)	-	297,139
Reserve for research and human resource development	(484,000)	484,000	-	-
Others	1,543,856	(103,463)	-	1,440,393
Carried forward tax credit	15,989,969	(15,254,100)	-	735,869
Deferred income tax assets	₩ 55,919,312	₩ (14,615,569)	₩ (234,796)	₩ 41,068,947

2) For the year ended December 31, 2016 (Unit: Korean won in thousands):

	Beginning balance	Reflected in income (loss)	Reflected in equity	Ending balance
Temporary differences:				
Cash flow hedges	₩ 170,571	₩ 579,745	₩ (149,852)	₩ 600,464
Property, plant and equipment	3,605,482	478,100	-	4,083,582
Investments in subsidiaries	608,988	172,328	-	781,316
Intangible assets	4,462,372	39,931	-	4,502,303
AFS financial assets	1,245,296	(117,820)	(305,906)	821,570
Accrued expense	6,740,048	(522,446)	-	6,217,602
Provisions	18,084,035	3,263,820	32,058	21,379,913
Doubtful receivable	98,863	-	-	98,863
Government subsidies	583,951	(200,077)	-	383,874
Reserve for research and human resource development	(1,452,000)	968,000	-	(484,000)
Others	(193,305)	1,737,161	-	1,543,856
Carried forward tax credit	8,288,499	7,701,470	-	15,989,969
Deferred income tax assets	₩ 42,242,800	₩ 14,100,212	₩ (423,700)	₩ 55,919,312

- (5) As of December 31, 2017 and 2016, temporary differences not recognized as deferred tax assets (liabilities) related to investment asset and equity interest are as follows (Unit: Korean won in thousands):

	December 31, 2017	December 31, 2016
Investments in subsidiaries	₩ 14,076,546	₩ 14,076,546
Investments in associates	11,357,267	11,357,267
Total	₩ 25,433,813	₩ 25,433,813

- (6) As of December 31, 2017 and 2016, unused tax credits not recognized as deferred tax assets are as follows (Unit: Korean won in thousands):

	December 31, 2017	December 31, 2016
Unused tax credits (*)	₩ 1,225,905	₩ -
Total	₩ 1,225,905	₩ -

(\*) The expiration date of the unused tax credits that are not recognized as deferred tax assets is within one year.

### 30. RELATED-PARTY TRANSACTIONS:

(1) Details of related parties as of December 31, 2017 and 2016, are as follows:

Year ended December 31, 2017		
Entity controlled by the Company ("Controlled entity")	Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*3)	Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*3)
Parent company and its subsidiaries:		
LG Corporation	Lusem Co., Ltd., and another Serveone Co., Ltd. and four others (*1) LG Management Development Institute LG Sports Ltd.	LG Holdings Japan Co., Ltd. and two others Serveone (Nanjing) Co., Ltd., and four others
Subsidiaries (*2): LG CNS Co., Ltd.	LG N-Sys Co., Ltd. Biztechpartners Co., Ltd. Korea Elecom Co., Ltd. Haemgbokmaru Co., Ltd	LG CNS China Inc. and 15 others
Associates and jointly controlled entity:		
LG CNS Co., Ltd.	Korea Smart Card Co., Ltd., and three others Songdo U-Life LLC and two others Sejong Green Power Co., Ltd.  Ulleungdo Natural Energy Co., Ltd. Daegu clean energy Co., Ltd.	RECAUDO BOGOTA S.A.S.  T-money America, Inc. and another Hellas SmarTicket Societe Anonyme KEPCO-LG CNS Mangilao Holdings LLC and two others
Associates and jointly controlled entity of parent company:		
LG Electronics Inc.	Hi Plaza Inc.  High-M Solutech Co., Ltd. HITeleservice Co., Ltd. New Growth Venture Fund New Growth Venture Fund II Ace R&A Co., Ltd. Hientec Co., Ltd. LG-Hitachi Water Solutions Co., Ltd. LG Innotek Co., Ltd. LG Innoteck Alliance Fund Innowith Co., Ltd. LG Hanuri Co. Ltd.	LG Electronics Mexico S.A.DE C.V. and others
LG Chem Ltd.	Haemgboknuri Co., Ltd. FarmHannong FarmHwaong Co., Ltd. Sarangnuri Co., Ltd.	LG Chem America, Inc. and others
LG Hausys, Ltd. LG Uplus Corp.	LG Hausys ENG, Ltd. CS Leader Ain Teleservice Medialog Corp. CS ONE Partner WithU	LG Hausys America, Inc. and others Dacom America, Inc.



Year ended December 31, 2017		
Entity controlled by the Company ("Controlled entity")	Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*3)	Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*3)
LG Household & Health Care Ltd.	Coca-Cola Beverage Co.  TheFaceShop Co., Ltd. Hankook Beverage Co., Ltd. HTB Co., Ltd. CNP COSMETICS CO., LTD. K&I Co., Ltd. Zenisce Co., Ltd. Balkeunnuri. Co., Ltd. OBM RAP Co., Ltd. LG Farouk Ulleungdo Choosan Water Development Co., Ltd.	Beijing LG Household Chemical Co., Ltd. and others
GIIR Corporation	HS Ad Co., Ltd. L.Best	GIIR America Inc. and another
LG Hitachi Co., Ltd. LG MMA Corp. LG Fuel Cell Systems Inc. Silicon Works Inc. LG International Corp.	LG Fuel Cell Systems (Korea) Inc.  Dangjin Tank Terminal Co., Ltd. Pantos Logistics Co., Ltd.  Pantos Logistics Pusan Co., Ltd. Helistar Air Co., Ltd.	Silicon Works Inc. and another LG International (America) Inc. and other Pantos Logistics (CHINA) Co., Ltd. and other
Conglomerate of many companies:		
LG Display Global Dynasty Investment Fund Sal de Vida Korea Co., Ltd. LG TOSTEM BM SEETEC Genstory Clean Soul Ltd. DACOM Crossing Jiheung	Nanumnuri Co., Ltd.	LG Display Nanjing Co. Ltd. and others
(*1) Direct shareholding of the relationship between corporate subsidiaries is included.		
(*2) Ownership interest of the dependent company at the end of the fiscal year under review is covered in comment 13 (1).		
(*3) Excluded joint venture of affiliates.		

Year ended December 31, 2016		
Controlled entity	Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*3)	Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*3)
Parent company and its subsidiaries:		
LG Corporation	Lusem Co., Ltd., and another Serveone Co., Ltd. and two others (*1)	LG Holdings Japan Co., Ltd. and another

Year ended December 31, 2016		
Controlled entity	Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*3)	Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*3)
Subsidiaries (*2): LG CNS Co., Ltd.	Siltron Inc.	Serveone Construction Co., Ltd., and five others
	LG Management Development Institute	Siltron America., Inc., and another
	LG Sports Ltd.	
	LG N-Sys Co., Ltd. BNE Partners Co., Ltd.	LG CNS China Inc. and 14 others
Associates and jointly controlled entity:		
LG CNS Co., Ltd.	Korea Elecom Co., Ltd. Haemgboknuri Co., Ltd Biztechpartners Co., Ltd.	
	Korea Smart Card Co., Ltd., and two others	RECAUDO BOGOTA S.A.S.
	Songdo U-Life LLC and two others	T-money America, Inc.
	Sejong Green Power Co., Ltd. Ulleungdo Natural Energy Co., Ltd. Daegu clean energy Co., Ltd.	Hellas SmartTicket Societe Anonyme
Associates and jointly controlled entity of parent company:		
LG Electronics Inc.	Hi Plaza Inc.	LG Electronics Mexico S.A.DE C.V. and others
	High-M Solutech Co., Ltd.	
	HiTeleservice Co., Ltd.	
	New Growth Venture Fund	
	New Growth Venture Fund II	
	Ace R&A Co., Ltd.	
	Hientec Co., Ltd.	
	LG-Hitachi Water Solutions Co., Ltd.	
	LG Innotek Co., Ltd.	
	LG Innoteck Alliance Fund	
	Innowith Co., Ltd.	
	LG Hanuri Co. Ltd.	
	Haemgboknuri Co., Ltd.	LG Chem America, Inc. and others
	FarmHannong	
LG Chem Ltd.	Agrotech.co., Ltd.	
	FarmBiotec Co., Ltd.	
	FarmHwaong Co., Ltd.	
	Sesil Corp.	
LG Hausys, Ltd.	LG Hausys ENG, Ltd.	LG Hausys America, Inc. and others
	CS Leader	Dacom America, Inc.
	Ain Teleservice	
	Medialog Corp.	
LG Uplus Corp.	CS ONE Partner	
	WithU	
	Coca-Cola Beverage Co.	Beijing LG Household Chemical Co., Ltd. and others
	TheFaceShop Co., Ltd.	
LG Household & Health Care Ltd.	Hankook Beverage Co., Ltd.	

Year ended December 31, 2016		
Controlled entity	Subsidiaries and jointly controlled entity of Controlled entity (domestic) (*3)	Subsidiaries and jointly controlled entity of Controlled entity (overseas) (*3)
	HTB Co., Ltd. Future Co., Ltd. CNP COSMETICS CO., LTD. K&I Co., Ltd. Zenisce Co., Ltd. Balkeunnuri. Co., Ltd. OBM RAP Co., Ltd. LG Farouk	
LG Life Science Co., Ltd.	Sarangnuri Co., Ltd.	LG Life Sciences India Pvt., Ltd. and another
GIIR Corporation	HS Ad Co., Ltd. L.Best	GIIR America Inc. and another
LG Hitachi Co., Ltd. LG MMA Corp. LG Fuel Cell Systems Inc. Silicon Works Inc.	LG Fuel Cell Systems (Korea) Inc.	Silicon Works Inc.
Conglomerate of many companies:		
LG Display	Nanumnuri Co., Ltd.	
LG International	Dangjin Tank Terminal Co., Ltd. Pantos Co., Ltd. Global Dynasty Investment Fund Sal de Vida Korea Co., Ltd. Pantos Logistics Pusan Co., Ltd. Helistar Air Co., Ltd.	
LG TOSTEM BM SEETEC Genstory Clean Soul Ltd. DACOM Crossing Jiheung		

(\*1) Direct shareholding of the relationship between corporate subsidiaries is included.

(\*2) Ownership interest of the dependent company at the end of the fiscal year under review is covered in comment 13 (1).

(\*3) Excluded joint venture of affiliates.

(2) Major transactions with the related parties for the years ended December 31, 2017 and 2016, are as follows.  
(Unit: Korean won in thousands):

Year ended December 31, 2017				
Description	Revenue and others	Purchase of raw material	Acquisitions of property, plant and equipment	Other purchase
Parent company and its subsidiaries:				
LG Corporation	₩ 3,469,320	₩ -	₩ -	₩ 12,192,689
Serveone Co., Ltd.	74,170,411	-	54,502,963	15,348,005
Siltron Co., Ltd. (*3)	4,595,475	-	-	-
LG Sports Co., Ltd.	1,491,344	-	-	40,547
LG Management Development Institute	5,235,690	-	-	4,338,013
LUSEM Co., Ltd.	1,638,486	-	-	-
Subtotal	90,600,726	-	54,502,963	31,919,254
Subsidiaries:				
LG CNS China Inc.	53,643,355	-	-	12,137,114
LG CNS Europe B.V.	20,478,027	-	-	1,151,913
LG CNS America, Inc.	19,441,307	-	-	3,612,289
LG CNS India Pvt., Ltd.	4,490,322	-	-	95,253
PT LG CNS Indonesia	8,246,330	-	-	338,910
Entrue Brasil Servicos de T.I. Ltda.	234,971	-	-	-
Biztech Partners Co., Ltd (formerly known as BNE Partners Co., Ltd (*5)	546,147	-	751,885	64,017,355
Ucess Partners Co., Ltd. (*2)	-	-	-	-
LG CNS Shenyang Inc. (*3)	-	-	-	-
LG N-Sys Co., Ltd.	9,180,857	-	16,558,060	198,424,448
Korea Elecom	32,460	-	-	1,376,248
SBI-LG Systems Co., Ltd.	238,754	-	-	-
LG CNS COLOMBIA SAS	376,383	-	-	214,958
Ever On Co., Ltd. (*2)	-	-	-	-
LG CNS Malaysia SDN Bhd	4,768,640	-	-	1,440,726
LG CNS JAPAN Co., Ltd.	2,001,427	-	-	16,138
Collain Healthcare LLC	1,931,020	-	-	1,370,196
LG CNS UZBEKISTAN, LLC	-	-	-	1,048,508
Haemgbokmaru Co., Ltd.	15,131	-	-	841,246
LG CNS Vietnam Co., Ltd. (*4)	18,879,405	-	-	-
Biztechpartners Co., Ltd. (*5)	-	-	-	-
Subtotal	144,504,536	-	17,309,945	286,085,302
Associates:				
Korea Smart Card Co., Ltd. (*1)	21,695,889	-	-	1,097,090
Songdo U-Life LLC (*1)	-	-	-	-
RECAUDO BOGOTA S.A.S.	-	-	-	-
Petro Cornergy Co., Ltd. (*4)	-	-	-	-
Sejong Green Power Co., Ltd.	5,722,265	-	-	-
Ulleungdo Natural Energy Co., Ltd.	357,250	-	-	-
Subtotal	27,775,404	-	-	1,097,090

Top Controlled entity's

Year ended December 31, 2017

Description	Revenue and others	Purchase of raw material	Acquisitions of property, plant and equipment	Other purchase
associates and jointly controlled entity:				
LG Chem Ltd. (*1)	217,273,605	-	-	16,028,490
LG Household & Health Care Ltd. (*1)	30,596,862	-	508,902	10,473,510
LG Hausys, Ltd. (*1)	18,481,772	-	-	450,125
LG Life Science Co., Ltd.	-	-	-	-
LG Electronics Inc. (*1)	534,130,872	135,434	1,084	72,927,908
GIIR Corporation (*1)	4,311,157	-	229,123	619,561
LG MMA Corp.	3,615,347	-	-	-
LG Hitachi Co., Ltd.	131,758	-	-	363,869
LG U Plus Co., Ltd. (*1)	261,612,655	-	579,960	22,519,663
Silicon Works Inc.	2,731,330	-	-	-
LG Fuel Cell Systems Inc.	74,723	-	-	-
LG International Corp. (*1,6)	28,216,228	30	-	1,944,819
Subtotal	1,101,176,309	135,464	1,319,069	125,327,945
Conglomerate of many companies:				
LG Display	205,290,198	-	-	322,965
LG TOSTEM BM	29,748	-	-	-
SEETEC	66,117	-	-	-
Subtotal	205,386,063	-	-	322,965
Total	₩ 1,569,443,038	₩ 135,464	₩ 73,131,977	₩ 444,752,556

Year ended December 31, 2016

Description	Revenue and others	Purchase of raw material	Acquisitions of property, plant and equipment	Other purchase
Parent company and its subsidiaries:				
LG Corporation	₩ 3,155,556	₩ -	₩ -	₩ 11,614,655
Serveone Co., Ltd.	38,464,562	-	11,560,202	18,463,112
Siltron Co., Ltd.	7,074,102	-	-	-
LG Sports Co., Ltd.	1,175,331	-	-	90,168
LG Management Development Institute	5,532,747	-	-	3,882,248
LG Solar Energy Co., Ltd. (*2)	-	-	-	-
LUSEM Co., Ltd.	1,300,716	-	-	118,881
Subtotal	56,703,014	-	11,560,202	34,169,064
Subsidiaries:				
LG CNS China Inc.	63,128,666	-	-	2,699,231
LG CNS Europe B.V.	19,465,850	-	-	1,353,958
LG CNS JAPAN Co., Ltd.	-	-	-	-
LG CNS America, Inc.	15,499,749	-	-	2,611,097
LG CNS India Pvt., Ltd.	3,309,489	-	-	400,303
PT LG CNS Indonesia	11,591,408	-	-	284,974
Entru Brasil Servicos de T.I. Ltda.	-	-	-	-
BNE Partners Co., Ltd.	302,194	-	-	33,212,727

Year ended December 31, 2016

Description	Revenue and others	Purchase of raw material	Acquisitions of property, plant and equipment	Other purchase
Ucess Partners Co., Ltd. (*3)	109,982	-	-	15,781,078
LG CNS Shenyang Inc.	12,275	-	-	205,324
LG N-Sys Co., Ltd.	7,544,639	-	18,735,435	182,683,198
Korea Elecom	32,460	-	-	935,914
SBI-LG Systems Co., Ltd.	6,870	-	-	-
LG CNS COLOMBIA SAS	315,877	-	-	983,837
Ever On Co., Ltd. (*3)	43,312	-	-	257,626
LG CNS Malaysia SDN Bhd	1,156,449	-	-	2,459,775
LG CNS JAPAN Co., Ltd.	9,178,587	-	-	-
Collain Healthcare LLC	848,774	-	-	922,068
Haemgboknuri Co., Ltd.	11,505	-	-	87,311
Biztechpartners Co., Ltd.	3,800	-	-	1,898,695
Subtotal	132,561,886	-	18,735,435	246,777,116
Associates:				
Korea Smart Card Co., Ltd. (*1)	22,415,089	-	-	892,158
Songdo U-Life LLC (*1)	3,113,439	-	-	-
RECAUDO BOGOTA S.A.S.	-	-	-	-
Petro Cornergy Co., Ltd. (*4)	30,853,086	-	-	-
Sejong Green Power Co., Ltd.	10,699,727	-	-	-
Ulleungdo Natural Energy Co., Ltd.	407,856	-	-	-
Subtotal	67,489,197	-	-	892,158
Top Controlled entity's associates and jointly controlled entity:				
LG Chem Ltd. (*1)	118,965,862	-	9,326,000	650,000
LG Household & Health Care Ltd. (*1)	27,728,954	-	-	9,799,908
LG Hausys, Ltd. (*1)	17,822,186	-	-	661,384
LG Life Science Co., Ltd.	5,024,683	-	-	1,863,232
LG Electronics Inc. (*1)	503,417,216	1,665,148	2,168,806	47,714,592
GIIR Corporation (*1)	6,096,579	-	153,905	1,468,119
LG MMA Corp.	3,108,345	-	-	-
LG Hitachi Co., Ltd.	85,689	-	-	1,545,607
LG U Plus Co., Ltd. (*1)	210,397,556	-	1,924,000	30,340,777
Silicon Works Inc.	2,228,786	-	-	-
LG Fuel Cell Systems Inc.	155,015	-	-	-
LG International Corp. (*1,6)	23,788,136	35	-	894,815
Subtotal	918,819,007	1,665,183	13,572,711	94,938,434
Conglomerate of many companies:				
LG Display	183,180,991	-	-	549,790
LG TOSTEM BM	29,577	-	-	-
SEETEC	74,107	-	-	-
Subtotal	183,284,675	-	-	549,790
Total	₩ 1,358,857,779	₩ 1,665,183	₩ 43,868,348	₩ 377,326,562

(3) Outstanding receivables and payables from transactions with related parties as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

Description	December 31, 2017			
	Account receivables and others (*1)	Loans	Account payables and others (*2)	Borrowings
Parent company and its subsidiaries:				
LG Corporation	₩ 5,518,925	₩ -	₩ 580,247	₩ -
Serveone Co., Ltd.	48,200,418	-	30,582,557	-
Siltron Co., Ltd.	-	-	-	-
LG Sports Co., Ltd.	69,111	-	-	-
LG Management Development Institute	3,727,906	-	227,070	-
LUSEM Co., Ltd.	64,525	-	-	-
Subtotal	57,580,885	-	31,389,874	-
Subsidiaries:				
LG CNS China Inc.	15,450,186	-	6,646,903	-
LG CNS Europe B.V. (*7)	10,844,116	-	132,972	-
LG CNS America Inc. (*5)	5,877,061	-	386,336	-
LG CNS India Pvt, Ltd.	6,180,982	-	-	-
PT LG CNS Indonesia	2,220,254	-	-	-
Biztech Partners Co., Ltd (formerly known as BNE Partners Co., Ltd (*5)	224,225	-	10,286,315	-
LG N-Sys Co., Ltd.	377,522	-	93,032,030	-
Korea Elecom	-	-	-	-
SBI-LG Systems Co., Ltd.	-	-	-	-
LG CNS COLOMBIA SAS	2,776,397	-	-	-
LG System Philippines, Inc. (*4)	68,501	2,366,841	-	-
LG CNS JAPANCo., Ltd.	359,300	-	-	-
LG CNS Malaysia SDN Bhd	4,734,000	-	-	-
Collain Healthcare LLC	1,847,101	-	310,669	-
LG CNS UZBEKISTAN, LLC	1,480,629	-	261,014	-
Hangbokmaru Co., Ltd.	89	-	6,720	-
LG CNS Vietnam Co., Ltd.	13,518,279	-	-	-
Biztechpartners Co., Ltd.	-	-	-	-
Subtotal	65,958,642	2,366,841	111,062,959	-
Associates:				
Korea Smart Card Co., Ltd. (*3)	2,006,660	-	164,984	-
RECAUDO BOGOTA S.A.S.	17,110,387	-	-	-
Petro Cornergy Co., Ltd.	-	-	-	-
Ulleungdo Natural Energy Co., Ltd.	83,600	-	-	-
Sejong Green Power Co., Ltd.	5,436,959	-	-	-
KEPCO-LG CNS Mangilao Holdings LLC	-	7,277,099	-	-
Subtotal	24,637,606	7,277,099	164,984	-
Top Controlled entity's associates and jointly controlled entity:				
LG Chem Ltd. (*3)	100,604,907	-	15,007,960	-
LG Household & Health Care Ltd. (*3)	3,019,854	-	301,427	-
LG Hausys, Ltd. (*3)	3,127,518	-	40,491	-
LG Life Science Co., Ltd.	-	-	-	-
LG Electronics Inc. (*3,6)	136,869,907	-	16,291,252	-
GIIR Corporation (*3)	1,213,067	-	250,596	-
LG MMA Corp.	569,327	-	-	-
LG Hitachi Co., Ltd.	12,544	-	205,890	-
LG Uplus Corp. (*3)	85,155,361	-	750,902	-

December 31, 2017				
Description	Account receivables and others (*1)	Loans	Account payables and others (*2)	Borrowings
Silicon Works Inc.	449,299	-	-	-
LG Fuel Cell Systems Inc.	-	-	-	-
LG International (*3)	5,535,341	-	439,609	-
Subtotal	336,557,125	-	33,288,127	-
Conglomerate of many companies:				
LG Display	74,633,327	-	-	-
LG TOSTEM BM	2,760	-	-	-
Subtotal	74,636,087	-	-	-
Total	₩ 559,370,345	₩ 9,643,940	₩ 175,905,944	₩ -

  

December 31, 2016				
Description	Account receivables and others (*1)	Loans	Account payables and others (*2)	Borrowings
Parent company and its subsidiaries:				
LG Corporation	₩ 5,256,453	₩ -	₩ -	₩ -
Serveone Co., Ltd.	25,260,281	-	8,173,384	-
Siltron Co., Ltd.	862,741	-	-	-
LG Sports Co., Ltd.	80,158	-	55,000	-
LG Management Development Institute	3,740,436	-	194,239	-
LUSEM Co., Ltd.	55,780	-	13,212	-
LG Solar Energy Co., Ltd.	-	-	-	-
Subtotal	35,255,849	-	8,435,835	-
Subsidiaries:				
LG CNS China Inc.	17,955,991	-	283,619	-
LG CNS Europe B.V. (*7)	9,605,958	-	146,206	-
LG CNS JAPAN Co., Ltd.	-	-	-	-
LG CNS America Inc. (*5)	6,135,524	-	191,890	-
LG CNS India Pvt. Ltd.	2,694,290	-	28,687	-
PT LG CNS Indonesia	2,092,787	-	-	-
BNE Partners Co., Ltd.	20,192	-	6,173,634	-
Ucess Partners Co., Ltd.	-	-	-	-
LG CNS Shenyang Inc.	-	-	-	-
LG N-Sys Co., Ltd.	516,436	-	90,983,472	-
Korea Elecom	-	-	6,111	-
SBI-LG Systems Co., Ltd.	23,518	-	-	-
LG CNS COLOMBIA SAS	2,670,588	-	-	-
Ever On Co., Ltd.	-	-	-	-
LG System Philippines, Inc. (*4)	77,266	2,669,710	-	-
LG CNS JAPANCo., Ltd.	3,870,030	-	-	-
Oneseen Skytech Co., Ltd.	-	-	-	-
LG CNS Malaysia SDN Bhd	1,144,246	1,963,813	1,120,498	-
Collain Healthcare LLC	892,581	-	241,700	-
LG CNS UZBEKISTAN, LLC	2,389,118	-	-	-
Hangbokmaru Co., Ltd.	8,959	-	-	-
Biztechpartners Co., Ltd.	-	-	1,429,708	-
Subtotal	50,097,484	4,633,523	100,605,525	-
Associates:				
Korea Smart Card Co., Ltd. (*3)	3,039,448	-	164,082	-
Songdo U-Life LLC (*3)	-	-	-	-
RECAUDO BOGOTA S.A.S.	19,843,715	-	-	-



Description	December 31, 2016			
	Account receivables and others (*1)	Loans	Account payables and others (*2)	Borrowings
Petro Cornergy Co., Ltd.	8,963,765	-	-	-
Ulleungdo Natural Energy Co., Ltd.	-	-	-	-
Sejong Green Power Co., Ltd.	300,000	-	-	-
Subtotal	32,146,928	-	164,082	-
Top Controlled entity's associates and jointly controlled entity:				
LG Chem Ltd. (*3)	36,252,324	-	10,690,900	-
LG Household & Health Care Ltd. (*3)	2,749,064	-	831,624	-
LG Hausys, Ltd. (*3)	5,096,025	-	66,908	-
LG Life Science Co., Ltd.	463,212	-	153,111	-
LG Electronics Inc. (*3,6)	130,810,444	-	11,780,436	-
GIIR Corporation (*3)	1,770,418	-	582,790	-
LG MMA Corp.	494,274	-	-	-
LG Hitachi Co., Ltd.	13,702	-	850,820	-
LG Uplus Corp. (*3)	85,523,180	-	4,711,334	-
Silicon Works Inc.	66,333	-	-	-
LG Fuel Cell Systems Inc.	76,482	2,332,405	-	-
LG International (*3)	3,044,019	-	174,997	-
Subtotal	266,359,477	2,332,405	29,842,920	-
Conglomerate of many companies:				
LG Display	89,151,581	-	-	-
LG TOSTEM BM	2,690	-	-	-
Subtotal	89,154,271	-	-	-
Total	₩ 473,014,009	₩ 6,965,928	₩ 139,048,362	₩ -

(\*1) Receivables from related party consist of trade receivables, other receivables and prepaid expenses.

(\*2) Payables to related party consist of trade payables, other payables and so on.

(\*3) It includes transactions with subsidiaries (including joint ventures).

(\*4) Bad debt allowances are recorded at 100% of receivables for the years ended December 31, 2017 and 2016.

(\*5) Bad debt allowances are recorded at ₩9,760 thousand and ₩10,155 thousand of receivables for the years ended December 31, 2017 and 2016, respectively.

(\*6) Bad debt allowances are recorded at ₩123,460 thousand and ₩85,978 thousand of receivables for the years ended December 31, 2017 and 2016, respectively.

(\*7) Bad debt allowances are recorded at ₩283 thousand and ₩1,025 thousand of receivables for the years ended December 31, 2017 and 2016, respectively.

(\*8) Bad debt allowances are recorded at ₩5,807,166 thousand and ₩22,725 thousand of receivables for the years ended December 31, 2017 and 2016, respectively.

(4) Cash transactions with the related parties for the years ended December 31, 2017 and 2016, are as follows:  
(Unit: Korean won in thousands):

Description	Year ended December 31, 2017				
	Payment in cash (reduction of capital)	Sale of interests	Loans		
			Loans	Payback	
Subsidiaries:					
LG CNS Vietnam Co., Ltd.	₩ 233,340	₩ -	₩ -	₩ -	-
LG CNS MALAYSIA SDN BHD	-	-	-	-	1,807,488
subtotal	233,340	-	-	-	1,807,488
Associates:					
KEPCO-LG CNS Mangilao Holdings LLC	-	-	7,609,914	-	-
Top controlled entity's associates and jointly controlled entity:	-	-	-	-	-
LG Fuel Cell Systems Inc.	5,641,252	-	-	-	2,271,321
Total	₩ 5,874,592	₩ -	₩ 7,609,914	₩ -	4,078,809
Year ended December 31, 2016					
Description	Payment in cash (reduction of capital)	Sale of interests	Loans		
			Loans	Payback	
Subsidiaries:					
Korea Elecom	₩ 4,900,521	₩ -	₩ -	₩ -	-
LG CNS MALAYSIA SDN BHD	-	-	1,814,800	-	-
LG CNS Saudi Arabia LLC	367,418	-	240,906	-	240,906
LG CNS UZBEKISTAN, LLC	356,398	-	-	-	-
subtotal	5,624,337	-	2,055,706	-	240,906
Associates:					
Hellas SmarTicket Societe Anonyme	1,469,160	-	-	-	-
Top controlled entity's associates and jointly controlled entity:	-	-	-	-	-
LG Fuel Cell Systems Inc.	3,887,181	-	-	-	-
Total	₩ 10,980,678	₩ -	₩ 2,055,706	₩ -	240,906

(5) Details of payment guarantees provided to related parties as of December 31, 2017, are as follows:

Related party	Guarantees	Limit of guarantees
LG CNS India Pvt, Ltd.	Credit line	INR 128,000,000
LG CNS India Pvt, Ltd.	Payment guarantees	USD 500,000
PT LG CNS Indonesia	Credit line	USD 1,200,000
PT LG CNS Indonesia	Credit line	USD 500,000
PT LG CNS Indonesia	Credit line	USD 840,000
PT LG CNS Indonesia	Credit line	USD 960,000
PT LG CNS Indonesia	Credit line	USD 500,000
PT LG CNS Indonesia	Payment guarantees	IDR 25,075,673,700
PT LG CNS Indonesia	Payment guarantees	IDR 12,537,836,850
PT LG CNS Indonesia	Payment guarantees	IDR 11,864,284,201
LG CNS America Inc.	Credit line	USD 15,000,000
LG CNS America Inc.	Payment guarantees	USD 34,999,070
LG CNS COLOMBIA SAS	Credit line	USD 3,000,000
LG CNS COLOMBIA SAS	Credit line	USD 5,500,000
LG CNS COLOMBIA SAS	Credit line	USD 4,500,000
LG CNS Europe B.V.	Credit line	EUR 1,800,000
LG CNS MALAYSIA SDN BHD	Credit line	MYR 7,000,000
LG CNS MALAYSIA SDN BHD	Payment guarantees	USD 451,901
LG CNS MALAYSIA SDN BHD	Payment guarantees	MYR 2,110,000
LG CNS JAPAN Co., Ltd.	Payment guarantees	JPY 356,400,000
LG CNS JAPAN Co., Ltd	Payment guarantees	JPY 6,000,000
LG CNS JAPAN Co., Ltd	Payment guarantees	JPY 1,254,566,340
LG CNS JAPAN Co., Ltd	Credit line	JPY 500,000,000
Hellas SmarTicket Societe Anonyme	Payment guarantees	EUR 28,000,000

(6) The compensation and benefits for the Company's key management (registered executives, including non-permanent and non-registered executives) who have significant control and responsibility on planning, operating and controlling the activities of the Company for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Short-term employee benefits	₩ 15,288,761	₩ 14,719,508
Severance benefits	2,003,413	2,412,726
Other long-term employee liabilities	4,381	1,753
Total	₩ 17,296,555	₩ 17,133,987

(7) Other commitments

The Company has entered into an indemnity agreement with Sejong Green Power Co., Ltd. for the operating loss in relation to the power sales business of the related company. In addition, the Company has the obligation to purchase shares of Sejong Green Power Co., Ltd. owned by the financial sponsor if the number of years in which the Company has not been in operation for more than 30 days is two years in succession.

### 31. FUNDING ARRANGEMENTS AND PLEDGING:

(1) Commitment (Unit: Korean won in thousands and U.S. dollars):

Category (*1)	Financial institution	Limit of credit
Comprehensive import and export	Woori Bank	USD5,800,000
Overdraft	Woori Bank	₩5,000,000
Forward exchange	Woori Bank	USD3,000,000
Forward exchange	Hana Bank	USD19,100,000
Forward exchange	Shinhan Bank	USD15,000,000
Forward exchange	HSBC	USD20,000,000
Credit line of electronic payment	Woori Bank	₩6,000,000
Credit line of electronic payment	Hana Bank	₩20,000,000
Credit line of electronic payment	Shinhan Bank	₩10,000,000
Credit line of electronic payment	Giyup Bank	₩15,000,000
Credit line of electronic payment	NH Bank	₩4,000,000
Other payment guarantee	Woori Bank	₩5,000,000
Other payment guarantee	Shinhan Bank	₩36,000,000

(\*1) Both blanket credit agreement and individual credit agreement are presented.

(\*2) Payment guarantees provided for the related parties are described in Note 30 (5).

(2) Restricted financial assets (Unit: Korean won in thousands):

Account	December 31, 2017	December 31, 2016
Financial institution deposits	₩ 12,500,000	₩ 6,500,000
Long-term deposits	11,000	11,000
Total	₩ 12,511,000	₩ 6,511,000

(3) Details of pledging

1) Performance guarantee

The Company provides following performance guarantee for contracts and warrants to customers by insuring guarantee insurance as of December 31, 2017 (Unit: Korean won in thousands):

	Amounts of guarantees	Insurance company
	₩ 29,408,250	Seoul Guarantee Insurance
Guarantee of contract and warranties, etc.	581,599,743	Korea Software Financial Cooperative
	5,148,163	Engineering Financial Cooperative
	110,205,240	KEB HANA Bank and others
Total	₩ 726,361,396	

2) Collateral

Out of AFS financial assets, capital stock investments to Korea Software Financial Cooperative and Plant and Mechanical Contractors Financial Cooperative & Engineering Financial Cooperative of Korea amounting to ₩1,300 million and ₩779 million, respectively, are provided as collateral in relation to performance guarantee provided by the cooperatives. In addition, capital stock investments to Smile gate investment Co. Ltd., amounting to ₩195 million is provided as collateral.

3) There are no non-financial assets and financial assets pledged as collateral for the year ended December 31, 2017, are under review.

### 32. OPERATING LEASE CONTRACTS:

(1) The Company as lessee

- 1) The Company entered into the operating lease contracts with regard to building, vehicle and office equipment. Payment schedule related to the major operating lease contracts as of December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

December 31, 2017

Lessor	Contents	Within one year	One year–five years	After five years	Total
The Federation of Korean Industries	Real estate leasing	₩ 2,967,246	₩ -	₩ -	₩ 2,967,246
LG Corp.	Real estate leasing	5,896,622	23,586,490	37,345,275	66,828,387
Others	Real estate leasing	568,723	89,252	-	657,975
Total		₩ 9,432,591	₩ 23,675,742	₩ 37,345,275	₩ 70,453,608

December 31, 2015

Lessor	Contents	Within one year	One year–five years	After five years	Total
The Federation of Korean Industries	Real estate leasing	₩ 11,868,985	₩ 11,868,985	₩ -	₩ 23,737,970
LG Corp.	Real estate leasing	5,896,622	23,586,490	43,241,898	72,725,010
Others	Real estate leasing	618,540	51,914	-	670,454
Total		₩ 18,384,147	₩ 35,507,389	₩ 43,241,898	₩ 97,133,434

- 2) The Company's lease payments recognized related to operating lease contracts for the years ended December 31, 2017 and 2016, are ₩20,082,396 thousand and ₩20,746,658 thousand, respectively.

(2) The Company as lessor

- 1) The Company entered into the building lease contract with LG Uplus Co., Ltd., and 12 others. Collection schedule related to the major operating lease contracts as of December 31, 2017 and 2016, is as follows (Unit: Korean won in thousands):

	Lessee	Within one year	One year– five years	Total
December 31, 2017	LG Uplus Co., Ltd.	₩ 93,540	₩ 17,360	₩ 110,900
	LG N-Sys Co., Ltd., and five others	1,637,139	5,319,019	6,956,158
December 31, 2016	LG Uplus Co., Ltd.	111,380	106,560	217,940
	Youngnam Protech Co., Ltd., and five others	332,575	938,414	1,270,989

- 2) The Company's lease revenues recognized related to operating lease contracts for the years ended December 31, 2017 and 2016, are ₩838,100 thousand and ₩527,031 thousand, respectively.

### 33. PENDING LITIGATION AND DISPUTES:

Pending litigation and disputes as of December 31, 2017, are as follows (Unit: Korean won in thousands):

	Amount of lawsuit	Plaintiff	Defendant
Claims for overused software (S/W) license	₩ 2,544,300	EPP-Media Co., Ltd.	LG CNS Co., Ltd.
Claims for unfair joint activities	48,902,750	Kookmin Bank Co., Ltd	LG CNS Co., Ltd. and others
Claims for unfair joint activities	13,298,811	Industrial Bank of Korea	LG CNS Co., Ltd. and others
Claims for unfair joint activities	21,313,900	Woori FIS.	LG CNS Co., Ltd. and others
Claims for unfair joint activities	78,755,530	National Agricultural Cooperatives Foundation	LG CNS Co., Ltd. and others
Claims for unfair joint activities	1,693,134	National Federation of Fisheries Cooperatives	LG CNS Co., Ltd. and others
Claims for unfair joint activities	200,000	Hana Bank	LG CNS Co., Ltd. and others
Claims for construction costs	100,000	Taewon tech	LG CNS Co., Ltd.
Claims for National Defense Network	5,000,000	Republic of Korea	LG CNS Co., Ltd.
Claims for defect occurrences of pull box	1,705,147	Korea Hydro&Nuclear Power Co., Ltd	LG CNS Co., Ltd.
Litigation with the issue of the amount of compensation of deferment	876,341	LG CNS Co., Ltd.	National Federation of Fisheries Cooperatives
Litigation of transfer of ownership registration	1,796,611	LG CNS Co., Ltd	KT CO., LTD
Litigation of service payment	7,399,894	LG CNS Co., Ltd	Korea Customs Service
Claims for payment charge of unmanned aerial vehicle and confirmation of debt absence	2,560,000	LG CNS Co., Ltd	Republic of Korea (Defense Acquisition Program Administration)

The final result of the litigation and effect on separate financial statements cannot be estimated as of the end of the reporting period.

### 34. RISK MANAGEMENT:

#### (1) Capital risk management

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

The Company'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 Company is unchanged from prior period. In addition, items managed as capital by the Company as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

	December 31, 2017		December 31, 2016	
Total borrowings	₩	449,124,837	₩	451,492,937
Less: cash and cash equivalents		180,326,415		226,311,871
Borrowings, net		268,798,422		225,181,066
Total equity	₩	908,617,119	₩	834,329,313
Debt ratio		29.58%		26.99%

#### (2) Financial risk management

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

##### 1) Foreign currency risk

The Company is exposed to foreign currency risk as it makes transactions denominated in foreign currencies. The book value of the Company's monetary assets and liabilities denominated in foreign currencies that are not the functional currency as of December 31, 2017, is as follows (Unit: Korean won in thousands):

Currency	Assets		Liabilities	
USD	₩	89,079,233	₩	13,021,691
EUR		31,063,390		5,141,880
JPY		559,567		96,302
CNY		645,064		2,955,941
Others		35,250,514		4,694,712
Total	₩	156,597,768	₩	25,910,526

The Company internally assesses the foreign currency risk from changes in exchange rates on a regular basis. The Company's sensitivity to a 10% increase and 10% decrease in the Korean won (functional currency of the Company) against the major foreign currencies as of December 31, 2017, is as follows (Unit: Korean won in thousands):

Currency	10% increase against foreign currency	10% decrease against foreign currency
USD	₩ 5,765,162	₩ (5,765,162)
EUR	1,964,850	(1,964,850)
JPY	35,115	(35,115)
CNY	(175,164)	175,164
Others	2,316,130	(2,316,130)
Total	₩ 9,906,093	₩ (9,906,093)

Above sensitivity analysis is conducted for monetary assets and liabilities denominated in foreign currencies other than functional currency as of December 31, 2017.

As of December 31, 2017, the Company entered into cross-forward foreign currency contracts to manage its foreign currency exchange rate risk related to its expected sale and purchase. The evaluation of unsettled currency forward contracts as of December 31, 2017, is as follows (Unit: Korean won in thousands):

	Notional amount	Valuation gain and loss		Fair value	
		Gain	Loss	Assets	Liabilities
Currency forward	₩162,096,544	₩ 1,671,559	₩ 1,835,613	₩ 1,715,664	₩ 1,835,613

## 2) Price risk

The Company is exposed to price risks from AFS equity instruments. As of December 31, 2017, fair value of AFS equity instruments is ₩1,944,773 thousand, and when all the other variables are constant and when the price of equity instrument changes by 10%, the effect to equity will be ₩147,414 thousand (effect after tax).



### 3) Credit risk

Credit risk refers to the risk of financial losses to the Company when the counterparty defaults on the obligations of the contract.

Credit risk arises from AFS financial assets (bond), financial institution deposits and limit of payment guarantee, as well as credit risks of customers, including loans and receivables. As for banks and financial institutions, the Company is making transactions with reputable financial institutions and, therefore, the credit risk from it is limited. For ordinary transactions, customers' financial status, credit history and other factors are considered to evaluate their credit status. The Company does not have policies to manage credit limits of each customer.

Credit risk exposure of loans and receivables is similar to the carrying value. The maximum exposure to credit risk of payment guarantee is ₩139,466 million (financial payment guarantee limits described in Note 30 (5)).

The exposure to credit risk based on book value by major industries, to which the Company's customers belong, is as follows (Unit: Korean won in thousands):

	Manufactur -ing	Financial service	Other service	Public institutions	Others	Total
Financial asset at FVTPL	₩ -	₩ -	₩ -	₩ -	₩ 1,715,664	₩ 1,715,664
Loans and receivables	488,291,067	196,774,012	16,279,592	21,863,779	1,944,763	725,153,213
Limit of payment guarantee	-	-	139,465,777	-	-	139,465,777
Total	<u>₩ 488,291,067</u>	<u>₩ 196,774,012</u>	<u>₩ 155,745,369</u>	<u>₩ 21,863,779</u>	<u>₩ 3,660,427</u>	<u>₩ 866,334,654</u>

#### 4) Liquidity risk

The Company manages liquidity risk by establishing short-, medium- and long-term funding plan and continuously monitoring actual cash outflow and its budget to match the maturity profiles of financial assets and liabilities. Management of the Company believes that financial liability may be redeemed by cash flows arising from operating activities and financial assets.

Maturity analysis of non-derivative financial liabilities according to its remaining maturity as of December 31, 2017, is as follows (Unit: Korean won in thousands):

	Within one year	One year–five years	After five years	Total
Non-interest-bearing financial instruments	₩ 456,075,611	₩ 1,834,064	₩ -	₩ 457,909,675
Fixed interest rate financial instrument	158,527,150	314,265,200	-	472,792,350
Limit of payment guarantee	139,465,777	-	-	139,465,777
Total	₩ 754,068,538	₩ 316,099,264	₩ -	₩ 1,070,167,802

(\*1) It includes the payment guarantees for foreign subsidiaries (USD 67,950,971, EUR 29,800,000 or JPY 2,116,966,340, MYR 9,110,000, INR 128,000,000, IDR 49,477,794,751) in Paragraph 30 (5). Based on the expectation as of December 31, 2017, the Company believes that possibility of payment on guaranteed amount is not higher. However, the expectation could be changed because warrantees may request payment to the Company according to the credit loss on the financial assets held by the warrantees.

The above maturity analysis 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 its remaining maturity as of December 31, 2017, is as follows (Unit: Korean won in thousands):

		Within one year	One year–five years	After five years
Derivative assets for trading				
Foreign currency derivatives	Inflows	₩ (161,218,284)	₩ -	₩ (161,218,284)
(*)	Outflow	161,098,335	-	161,098,335
Total		₩ (119,949)	₩ -	₩ (119,949)

(\*) As the cash flows from the foreign currency derivative contracts are settled gross, the cash flows are disclosed separately.

### (3) Estimation of fair value

The fair values of financial instruments (i.e., financial assets held for trading and financial assets AFS) traded in active markets are determined with reference to quoted market prices. The Company 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 Company 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. When such prices are not available, a discounted cash flow (DCF) analysis or other valuation technique is performed to measure their fair values.

The fair values of trade receivable and trade payables are approximated as their carrying value, less impairment loss. The Company 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 Level 1 to Level 3, based on the degree to which the fair value is observable, as described below:

- Level 1: Fair value measurements are derived from quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Fair value measurements are 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 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 subsequently to initial recognition at fair value by fair value hierarchy levels as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

		December 31, 2017				
		Book value	Level 1	Level 2	Level 3	Total
Financial assets:						
Non-designated derivative instrument for trading		₩ 1,715,664	₩ -	₩ 1,715,664	₩ -	₩ 1,715,664
Non-marketable equity securities		1,944,773	1,944,773	-	-	1,944,773
Debt securities		4,045,589	-	-	4,045,589	4,045,589
Total		₩ 7,706,026	₩ 1,944,773	₩ 1,715,664	₩ 4,045,589	₩ 7,706,026
Financial liabilities:						
Derivative instrument for trading		₩1,835,613	₩-	₩1,835,613	₩-	₩1,835,613
Total		₩ 1,835,613	₩ -	₩ 1,835,613	₩ -	₩ 1,835,613

December 31, 2016					
	Book value	Level 1	Level 2	Level 3	Total
Financial assets:					
Non-designated derivative instrument for trading	₩ 1,376,168	₩ -	₩ 1,376,168	₩ -	₩ 1,376,168
Non-marketable equity securities	2,160,394	2,160,394	-	-	2,160,394
Debt securities	3,953,182	-	-	3,953,182	3,953,182
Total	₩ 7,489,744	₩ 2,160,394	₩ 1,376,168	₩ 3,953,182	₩ 7,489,744
Financial liabilities:					
Derivative instrument for trading	₩3,629,082	₩-	₩3,629,082	₩-	₩3,629,082
Derivative instrument for hedges	228,341	-	228,341	-	228,341
Total	₩ 3,857,423	₩ -	₩ 3,857,423	₩ -	₩ 3,857,423

2) Valuation method and input variables of financial instruments, which are included in Level 2 of the financial instruments that are measured at fair value on the balance sheet are as follows. (Unit: Korean won in thousands):

	Fair Value	Valuation Technique	Input factor
Financial assets:			
Derivative instrument for trading	₩ 1,715,664	DCF	Forward Exchange Rate
Financial liabilities:			
Derivative instrument for trading	1,835,613	DCF	Forward Exchange Rate
Total	₩ 3,551,277		

3) The levels of the fair value of financial instruments without subsequent measurement at fair value as of December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

December 31, 2017					
	Book value	Level 1	Level 2	Level 3	Total
Financial assets:					
Financial institution deposits	₩ 22,500,000	₩ -	₩ -	₩ 22,500,000	₩ 22,500,000
Trade receivables (*)	663,219,887	-	-	663,219,887	663,219,887
Loans (*)	10,193,096	-	-	10,193,096	10,193,096
Other accounts receivable (*)	11,156,248	-	-	11,156,248	11,156,248
Accrued income (*)	174,678	-	-	174,678	174,678
Deposits (*)	17,909,304	-	-	17,909,304	17,909,304
Total	₩ 725,153,213	₩ -	₩ -	₩ 725,153,213	₩ 725,153,213
Financial liabilities:					
Trade payables (*)	₩ 310,283,177	₩ -	₩ -	₩ 310,283,177	₩ 310,283,177
Other accounts payable (*)	75,111,832	-	-	75,111,832	75,111,832
Accrued expenses (*)	70,680,108	-	-	70,680,108	70,680,108
Dividend payables (*)	494	-	-	494	494
Deposits received	1,834,064	-	1,834,064	-	1,834,064
Long-term borrowings	449,124,837	-	444,392,477	-	444,392,477
Total	₩ 907,034,512	₩ -	₩ 446,226,541	₩ 456,075,611	₩ 902,302,152

(\*) Short-term receivables and short-term payment obligations that have been shown to Level 3, the discount effect is not important, are measured in the original amount.

		December 31, 2016				
		Book value	Level 1	Level 2	Level 3	Total
Financial assets:						
Financial institution deposits	₩	6,500,000	₩	-	₩	6,500,000
Trade receivables (*)		570,198,036		-		570,198,036
Loans (*)		6,474,827		-		6,474,827
Other accounts receivable (*)		17,238,696		-		17,238,696
Accrued income (*)		131,308		-		131,308
Deposits (*)		19,335,838		-		19,335,838
Total	₩	619,878,705	₩	-	₩	619,878,705
Financial liabilities:						
Trade payables (*)	₩	306,930,556	₩	-	₩	306,930,556
Borrowings		52,154,547		-		52,154,547
Other accounts payable (*)		51,704,115		-		51,704,115
Accrued expenses (*)		61,177,741		-		61,177,741
Dividend payables (*)		1,905		-		1,905
Deposits received		261,438		261,438	-	261,438
Long-term borrowings		399,338,390		398,871,403	-	398,871,403
Total	₩	871,568,692	₩	-	₩	399,132,841
					₩	471,968,864
					₩	871,101,705

(\*) Short-term receivables and short-term payment obligations that have been shown to Level 3, the discount effect is not important, are measured in the original amount.

4) Changes in Level 3 financial assets for the years ended December 31, 2017 and 2016, are as follows (Unit: Korean won in thousands):

		Year ended December 31, 2017								
		Beginning balance	Net income (loss)	Comprehen- sive income	Purchases	Disposals	Ending balance			
Financial assets:										
Non-marketable equity securities	₩	3,953,182	₩	-	₩	92,407	₩	-	₩	4,045,589
Total	₩	3,953,182	₩	-	₩	92,407	₩	-	₩	4,045,589
		Year ended December 31, 2016								
		Beginning balance	Net income (loss)	Comprehen- sive income	Purchases	Disposals	Ending balance			
Financial assets:										
Non-marketable equity securities	₩	2,997,055	₩	-	₩	816,102	₩	140,025	₩	3,953,182
Total	₩	2,997,055	₩	-	₩	816,102	₩	140,025	₩	3,953,182

Meanwhile, some unmarketable equity securities of financial assets categorized within Level 3 are measured at cost as they do not have a quoted market price in an active market and as their fair value cannot be reliably measured. Total recognized gains and losses in other comprehensive income (loss), are related to non-listed shares that are currently held, and it will be reflected in the change of unrealized gains on AFS assets (Note 22).

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 that are advertised in the market at the end of the reporting period. If forward currency rates whose period is coincident with the residual period are not advertised in 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 in the market. Discount rates and forward currency 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 in 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 currency rate that is obtained by the method described above.

As 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 value measurement.

- Corporate bonds

The fair value of corporate bonds was measured by DCF. The discount rates used in DCF were determined based on advertised-in-market swap rates and credit spreads of the bonds whose credit rating and period were similar to those of corporate bonds and cumulative redeemable preference stocks. The discount rates that influence the fair value of corporate bonds and cumulative redeemable preference stocks significantly were classified as Level 2 fair value measurement 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, which are measured using a DCF 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 Company has classified the fair value hierarchy system as 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) A description of the valuation processes in the fair value measurement for Level 2 and Level 3 that the Company is carrying out is as follows:

The Company measures fair value of assets and liabilities for financial reporting purposes and reports the result of fair value measurements to chief finance 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 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 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, outside capital cost; capital cost estimates of the share value beta reflected for the purpose of the issuer of the shares; and capital structure based on the equity beta of comparable public companies derived based on the CAPM.

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

### 35. BUSINESS COMBINATION:

(1) The Company had agreed for the merger of Oneseen Skytech for improving competitiveness of the smart grid industry on May 1, 2016.

1) The Company measured acquired assets and liabilities at fair value, and the difference between the fair value and consideration for merger as reduction of capital. The fair value of identifiable assets and liabilities acquired in business combination as of May 1, 2016, is as follows (Unit: Korean won in thousands):

Description	May 1, 2016
Assets:	
Cash and cash equivalents	₩ 5,541
Other receivables	4,552
Other current assets	361,169
Inventories	155,178
Property, plant and equipment	1,159,361
Intangible assets	93,729
Total	₩1,779,530
LIABILITIES:	
Short-term borrowings	₩2,620,000
Other payables	14,761
Other liabilities	1,120
Total	₩ 2,635,881

2) Consideration for merger is only composed of stock (₩3,983 thousand). In addition, the difference between the fair value and consideration for merger is recognized as reduction of capital amounting to ₩860,334 thousand.

### 36. DISCONTINUED OPERATIONS:

#### (1) Disposal of ATM business

The Company entered into a sale agreement for the ATM business. the Company completed the physical division and disposal to buyer during the current year.

#### (2) Profits from discontinued operations

Details of profits from discontinued operations included in the separate statement income of the Company for the year ended December 31, 2017, are as follows (Korean won in thousands):

	2017	2016
Sales	₩ 74,931,187	₩ 89,234,433
Operating income (loss)	(7,048,964)	(12,121,956)
Profit before income tax expense	(8,407,897)	(26,203,950)
Income taxes benefit	(2,963,812)	(8,381,795)
Profit after income tax expense	(5,444,085)	(17,822,155)
Gain arising from discontinued operations		
Impairment loss(profit) arising from discontinued operations	(20,579,619)	-
Income taxes benefit	(7,254,385)	-
Impairment loss (profit) after income tax expense arising from discontinued operations (B)	(13,325,234)	-
Profits from discontinued operations (A+B)	(18,769,319)	(17,822,155)

#### (3) Cash flows from discontinued operations for the years ended December 31, 2017 and 2016, are as follows (Korean won in thousands):

	2017	2016
Net cash flows from operating activities	₩ (18,765,277)	₩ 12,566,388
Net cash flows from investing activities	(2,386,719)	(1,811,158)
Net cash flows from financing activities	-	-
Net cash flows	(21,151,996)	10,755,230



### 37. NON-CASH INVESTING AND FINANCING ACTIVITIES:

(1) Significant non-cash investing and financing activities for the years ended December 31, 2017 and 2016, are as follows: (2) Details of changes in liabilities arising from financing activities for the year ended December 31, 2017, are as follows (Korean won in thousands):

	Year ended December 31, 2017	Year ended December 31, 2016
Elimination of accounts receivable	₩ 207,301	₩ 246,851
Transfer to investment in subsidiaries and short-term loans	-	246,482
Transfer to AFS financial assets and investment in associates	-	195,000
Reclassification of current portion of other receivables	14,807,086	363,433
Reclassification of other assets to property, plant and equipment account and intangible assets	808,663	849,027
Reclassification of construction in progress to property, plant and equipment account	37,064,691	21,927,093
Other accounts payable related to acquisition of property, plant and equipment	35,019,279	-
Reclassification between property, plant and equipment and investment properties	21,720,386	-
Other accounts receivable related to disposal of investments in subsidiaries	9,461,220	-
Reclassification of current portion of borrowings	149,865,028	-

(2) Details of changes in liabilities arising from financing activities for the year ended December 31, 2017, are as follows (Korean won in thousands):

	Beginning balance	Cash change	Non-cash change	Ending balance
			Effect of foreign currency translation	
			Reclassificat ion	Reclassificati on
Short-term borrowings	₩ 2,154,547	₩(2,227,617)	₩ 73,070	₩ -
Current portion of long-term borrowings	149,984,453	(150,000,000)	-	149,865,028
Long-term borrowings	299,353,937	149,365,460	-	(149,865,028)
Assets held to avoid the risk of long-term borrowings	228,341	(248,630)	-	-
Total	₩ 451,721,278	₩(3,110,787)	₩ 73,070	₩ 441,276
				₩449,124,837

**38. SUBSEQUENT EVENTS:**

(1) The Company resolved at the board of directors' meeting on January 17, 2018, to merge with LG N-Sys Co., Ltd. for the purpose of improving management efficiency, etc. The merger date is April 1, 2018.

(2) The Company resolved at the board of directors' meeting on February 6, 2018, to liquidate LG CNS Saudi Arabia LLC. The liquidation is expected to be finally completed in the first half of 2018.

**39. APPROVAL OF SEPARATE FINANCIAL STATEMENTS:**

The separate financial statements are approved by the board of directors on February 6, 2018, and are expected to be finally approved at the shareholders' meeting on March 22, 2018.