Coway Co., Ltd. and its subsidiaries

Consolidated financial statements
for the years ended December 31, 2016 and 2015
with the independent auditors' report

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Independent auditors' report

The Stockholders and Board of Directors
Coway Co., Ltd. and its subsidiaries

We have audited the accompanying consolidated financial statements of Coway Co., Ltd. (the "Company") and its subsidiaries (collectively, the "Group"), which comprise the consolidated statements of financial position as at December 31, 2016 and 2015, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the consolidated financial statements
Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility
Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

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

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

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2016 and 2015, and its financial performance and cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

Ernst & Young Han Young

March 20, 2017

This audit report is effective as at March 22, 2017, the independent auditors' report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the auditors' report date to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

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Coway Co., Ltd. and its subsidiaries

Consolidated financial statements
for the years ended December 31, 2016 and 2015

"The accompanying consolidated financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Group."

Hae Sun Lee
Chief Executive Officer
Coway Co., Ltd.

Coway Co., Ltd. and its subsidiaries
Consolidated statements of financial position
as at December 31, 2016 and 2015
(Korean won in thousands)

	Notes	2016	2015
Assets			
Current assets:			
Cash and cash equivalents	4, 5, 36, 37	₩ 66,306,979	₩ 116,307,900
Trade receivables, net	4, 6, 36, 37	292,776,989	256,015,920
Finance lease receivables, net	4, 6, 36, 37	33,338,986	8,955,735
Other short-term financial assets, net	4, 7, 36, 37	62,705,776	15,398,219
Other current assets	8	206,331,822	185,690,970
Inventories, net	9	70,194,665	69,820,809
Income tax receivables	32	1,478,859	1,128,465
Total current assets		733,134,076	653,318,018
Non-current assets:			
Long-term trade receivables	4, 6, 36, 37	23,612,266	-
Long-term finance lease receivables, net	4, 6, 36, 37	104,994,760	28,144,342
Other long-term financial assets, net	4, 7, 36, 37	52,840,420	52,068,160
Other non-current assets	8	157,297,276	147,080,590
Available-for-sale financial assets	4, 10, 36, 37	2,464,020	2,430,096
Defined benefit assets, net	17	5,851,872	-
Property, plant and equipment, net	3,11	669,403,180	699,511,862
Intangible assets, net	3,12	182,993,862	168,786,681
Investment properties, net	3,13	33,593,899	23,173,559
Deferred income tax assets	3,32	1,522,262	883,834
Total non-current assets		1,234,573,817	1,122,079,124
Total assets		**₩ 1,967,707,893**	**₩ 1,775,397,142**
Liabilities			
Current liabilities:			
Trade payables	4, 36, 37	₩ 58,724,469	₩ 59,799,441
Other short-term financial liabilities	4, 14, 36, 37	181,218,579	183,985,891
Other current liabilities	14	87,817,269	77,255,326
Short-term borrowings	4, 15, 36, 37	340,000,000	80,040,719
Income tax payables		47,867,955	70,198,266
Provisions	18	19,762,494	1,602,439
Total current liabilities		735,390,766	472,882,082
Non-current liabilities:			
Other long-term financial liabilities	4, 14, 36, 37	2,664,966	2,203,221
Other non-current liabilities	14	24,561,840	16,477,557
Long-term borrowings	4, 16, 36, 37	11,812,000	7,951,000
Defined benefit liabilities, net	17	-	12,373,703
Provisions	18	1,968,933	2,135,330
Deferred tax liabilities	32	7,965,630	23,146,419
Total non-current liabilities		48,973,369	64,287,230
Total liabilities		**₩ 784,364,135**	**₩ 537,169,312**
Equity			
Issued capital	21	40,662,398	40,662,398
Share premium		97,773,449	97,773,449
Retained earnings	22	1,179,735,673	1,177,049,753
Other components of equity	23, 24, 25	(135,356,490)	(78,122,382)
Equity attributable to equity holders of the parent		**1,182,815,030**	**1,237,363,218**
Non-controlling interests		528,728	864,612
Total equity		**1,183,343,758**	**1,238,227,830**
Total liabilities and equity		**₩ 1,967,707,893**	**₩ 1,775,397,142**

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

Coway Co., Ltd. and its subsidiaries
Consolidated statements of comprehensive income
for the years ended December 31, 2016 and 2015

(Korean won in thousands)

	Notes	2016	2015
Sales	3	₩ 2,376,328,167	₩ 2,315,242,283
Cost of sales		(812,176,526)	(728,843,093)
Gross profit		**1,564,151,641**	**1,586,399,190**
Selling and general administrative expenses	27	(1,225,354,188)	(1,123,060,003)
Operating profit		**338,797,453**	**463,339,187**
Other income	4,28	28,737,582	24,447,251
Other expenses	4,28	(38,890,266)	(30,407,140)
Finance income	4,29	1,212,325	1,423,176
Finance costs	4,29	(6,103,170)	(4,339,055)
Profit before tax		**323,753,924**	**454,463,419**
Income tax expense	32	(80,442,692)	(111,343,034)
Profit for the year		**₩ 243,311,232**	**₩ 343,120,385**
Profit attributable to			
Equity holders of the parent		₩ 243,647,116	₩ 343,148,058
Non-controlling interests		(335,884)	(27,673)
		₩ 243,311,232	₩ 343,120,385
Other comprehensive income (loss) for the year			
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:			
Gain on valuation of available-for-sale financial assets		₩ 20,867	₩ 9,879
Exchange differences on translation of foreign operations		(585,438)	(5,216,835)
Net other comprehensive loss to be reclassified to profit or loss in subsequent periods		**(564,571)**	**(5,206,956)**
Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods:			
Remeasurement loss on net of defined benefit plans		(239,498)	(3,625,636)
Net other comprehensive loss not to be reclassified to profit or loss in subsequent periods		**(239,498)**	**(3,625,636)**
Other comprehensive loss for the year		**(804,069)**	**(8,832,592)**
Total comprehensive income for the year		**₩ 242,507,163**	**₩ 334,287,793**
Attributable to:			
Equity holders of the parent		₩ 242,843,047	₩ 334,315,465
Non-controlling interests		(335,884)	(27,673)
		₩ 242,507,163	₩ 334,287,792
Earnings per share attributable to owners of the parent			
Basic earnings per share	33	₩ 3,280	₩ 4,621
Diluted earnings per share	33	3,261	4,597

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

Coway Co., Ltd. and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2016 and 2015
(Korean won in thousands)

	Attributable to equity holders of the parent						
	Issued capital	**Share premium**	**Retained earnings**	**Other components of equity**	**Total**	**Non-controlling interests**	**Total equity**
As at January 1, 2015	**₩ 40,662,398**	**₩ 97,773,449**	**₩ 985,875,249**	**₩ (85,768,352)**	**₩ 1,038,542,744**	**₩ 892,285**	**₩ 1,039,435,029**
Profit for the year	-	-	343,148,058	-	343,148,058	(27,673)	343,120,385
Gain on valuation of available-for-sale financial assets	-	-	-	9,879	9,879	-	9,879
Remeasurement loss on net of defined benefit liability	-	-	(3,625,636)	-	(3,625,636)	-	(3,625,636)
Exchange differences on translation of foreign operations	-	-	-	(5,216,835)	(5,216,835)	-	(5,216,835)
Total comprehensive income	**-**	**-**	**339,522,422**	**(5,206,956)**	**334,315,466**	**(27,673)**	**334,287,793**
Dividends	-	-	(148,347,918)	-	(148,347,918)	-	(148,347,918)
Stock options	-	-	-	6,477,819	6,477,819	-	6,477,819
Treasury shares	-	-	-	6,383,760	6,383,760	-	6,383,760
Other equity transactions	-	-	-	(8,651)	(8,651)	-	(8,651)
Total transactions with equity holders	**-**	**-**	**(148,347,918)**	**12,852,928**	**(135,494,990)**	**-**	**(135,494,990)**
As at December 31, 2015	**₩ 40,662,398**	**₩ 97,773,449**	**₩ 1,177,049,753**	**₩ (78,122,380)**	**₩ 1,237,363,220**	**₩ 864,612**	**₩ 1,238,227,832**
As at January 1, 2016	**₩ 40,662,398**	**₩ 97,773,449**	**₩ 1,177,049,753**	**₩ (78,122,380)**	**₩ 1,237,363,220**	**₩ 864,612**	**₩ 1,238,227,832**
Profit for the year	-	-	243,647,116	-	243,647,116	(335,884)	243,311,232
Gain on valuation of available-for-sale financial assets	-	-	-	20,867	20,867	-	20,867
Remeasurement loss on net of defined benefit liability	-	-	(239,498)	-	(239,498)	-	(239,498)
Exchange differences on translation of foreign operations	-	-	-	(585,438)	(585,438)	-	(585,438)
Total comprehensive income	**-**	**-**	**243,407,618**	**(564,571)**	**242,843,047**	**(335,884)**	**242,507,163**
Dividends	-	-	(208,032,045)	-	(208,032,045)	-	(208,032,045)
Stock options	-	-	-	3,126,475	3,126,475	-	3,126,475
Treasury shares	-	-	(32,689,654)	(59,109,879)	(91,799,533)	-	(91,799,533)
Other equity transactions	-	-	-	(686,135)	(686,135)	-	(686,135)
Total transactions with equity holders	**-**	**-**	**(240,721,699)**	**(56,669,539)**	**(297,391,238)**	**-**	**(297,391,238)**
As at December 31, 2016	**₩ 40,662,398**	**₩ 97,773,449**	**₩ 1,179,735,672**	**₩ (135,356,490)**	**₩ 1,182,815,029**	**₩ 528,728**	**₩ 1,183,343,757**

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

Coway Co., Ltd. and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2016 and 2015
(Korean won in thousands)

	Notes	2016	2015
Operating activities:			
Profit for the year		₩ 243,311,232	₩ 343,120,385
Adjustments	34	466,500,507	448,429,227
Changes in operating assets and liabilities	34	(232,344,179)	(195,292,142)
Cash generated from operations		477,467,560	596,257,470
Dividends received		1,990	-
Income tax paid		(119,925,235)	(83,414,608)
Net cash flows provided by operating activities		**357,544,315**	**512,842,862**
Investing activities:			
Increase in other short-term financial assets		(42,001,384)	(23,384)
Decrease in other short-term financial assets		152,445	39,500
Increase in other long-term financial assets		(15,468,331)	(9,459,583)
Decrease in other long-term financial assets		14,573,048	9,574,694
Proceeds from disposal of available-for-sale financial assets		-	193
Proceeds from disposal of investments in associates		-	100,000
Acquisition of property, plant and equipment		(328,200,851)	(329,278,843)
Proceeds from disposal of property, plant and equipment		15,258,005	8,890,026
Acquisition of intangible assets		(13,501,229)	(6,147,835)
Proceeds from disposal of intangible assets		480,000	700,000
Proceeds from disposal of investment properties		-	3,131,000
Interests received		1,210,334	1,625,766
Changes in the scope of consolidation		-	(8,650,571)
Net cash flows used in investing activities		**(367,497,963)**	**(329,499,037)**
Financing activities:			
Increase (decrease) in short-term borrowings		259,959,281	(84,361,389)
Increase in long-term borrowings		3,861,000	7,019,000
Government grants received		4,706,184	11,411,910
Payment of dividends	22	(208,032,045)	(148,347,918)
Purchase of treasury shares		(97,998,616)	-
Exercise of share options		4,718,014	5,238,160
Interests paid		(7,192,805)	(4,368,143)
Net cash flows used in financing activities		**(39,978,987)**	**(213,408,380)**
Net decrease in cash and cash equivalents		(49,932,635)	(30,064,555)
Cash and cash equivalents at January 1		116,307,900	147,363,023
Net foreign exchange difference		(68,286)	(990,568)
Cash and cash equivalents at December 31		**₩ 66,306,979**	**₩ 116,307,900**

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

1. Corporate information

The general information of Coway Co., Ltd. (the "Company") and its 6 subsidiaries including Coway (M) Sdn Bhd. (collectively, the "Group") are as follows:

1.1 Company overview

Woongjin Coway Co., Ltd. was renamed to Coway Co., Ltd. on December 14, 2012 and was incorporated on May 2, 1989 under the laws of the Republic of Korea to engage in the manufacture and sales or rent of water purifiers and home appliances, construction of waste disposal facilities and other related businesses. The Company's ordinary shares have been listed on the Korea Exchange since 2001.

The Company's operations are headquartered in Gong-ju City, South Chungcheong Province. As at December 31, 2016, the Company's majority stockholder is Coway Holdings Co. Ltd. holding 31.20% equity ownership.

1.2 Subsidiaries

The Group's consolidated subsidiaries as at December 31, 2016 and 2015 are as follows:

Subsidiaries	Equity ownership (%) 2016	Equity ownership (%) 2015	Country of domicile	Year-end	Principal activity
Coway China Co., Ltd.	100%	100%	China	December	Sales of air cleaner
Coway (Thailand) Co., Limited	″	″	Thailand	″	Sales and lease of water purifiers
Coway (M) Sdn Bhd.	″	″	Malaysia	″	Sales and lease of water purifiers
Coway USA Inc.	″	″	U.S.A.	″	Sales and lease of water purifiers
Green Environment Technology Co., Ltd.	-	″	Korea	″	Construction of waste disposal facilities and operating facilities
Coway EnTech Co., Ltd.	100%	-	″	″	Construction of waste disposal facilities and operating facilities
Pocheon Malkunmul Co., Ltd.	70%	70%	″	″	Construction and operating industrial water facilities of Pochen Jangja Industrial Complex

1.3 Summary of the subsidiaries' financial information

Summarized financial information of subsidiaries as at and for the years ended December 31, 2016 and 2015 is as follows (Korean won in thousands):

	2016					
	Assets	Liabilities	Equity	Sales	Profit (loss) for the year	Comprehensive income (loss)
Coway USA Inc.	₩ 51,717,544	₩ 53,218,426	₩ (1,500,882)	₩ 60,206,737	₩ (102,308)	₩ (148,682)
Coway (Thailand) Co., Limited	3,841,581	17,904,623	(14,063,042)	4,822,734	(1,427,369)	(1,891,107)
Coway (M) Sdn Bhd.	173,687,559	162,456,304	11,231,255	142,990,001	(2,982,726)	(3,056,005)
Coway China Co., Ltd.	9,105,191	10,069,665	(964,474)	14,049,020	(1,308,618)	(1,310,665)
Coway EnTech Co., Ltd.	48,873,827	15,363,243	33,510,584	37,007,342	3,701,207	3,753,614
Pocheon Malkunmu Co., Ltd.	15,146,066	13,384,634	1,761,432	254,087	(1,119,058)	(1,119,058)

1.3 Summary of the subsidiaries' financial information (cont'd)

	2015					
	Assets	Liabilities	Equity	Sales	Profit (loss) for the year	Comprehensive income (loss)
Coway USA Inc.	₩ 50,294,457	₩ 51,646,657	₩ (1,352,200)	₩ 57,234,598	₩ 37,027	₩ (48,023)
Coway (Thailand) Co., Limited	3,747,334	15,919,269	(12,171,935)	6,435,221	(1,744,124)	(1,405,096)
Coway (M) Sdn Bhd.	98,099,421	83,812,161	14,287,261	97,764,066	(1,470,738)	(3,743,786)
Coway China Co., Ltd.	8,185,953	7,839,763	346,190	12,504,202	(2,953,162)	(2,913,705)
Green Environment Technology Co., Ltd.	32,415,280	18,950,984	13,464,296	64,922,274	2,893,827	2,853,555
Pocheon Malkunmu Co., Ltd.	18,483,976	15,603,486	2,880,490	-	(92,193)	(92,193)

1.4 Changes in the scope of consolidation

Changes in the scope of consolidation for the year ended December 31, 2016 are as follows:

Scope of consolidation	Company	Rationale
Inclusion	Coway EnTech Co., Ltd.	New corporation established by physical division of parent company
Exclusion	Green Environment Technology Co., Ltd.	Merged with Coway EnTech Co., Ltd.

2. Basis of preparation and summary of significant accounting policies

2.1 Basis of preparation

The Group prepares statutory financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the *Act on External Audit of Stock Companies*. The accompanying consolidated financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditors' report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

The consolidated financial statements have been prepared on a historical cost basis, except when otherwise indicated. The consolidated financial statements are presented in Korean won and all values are rounded to the nearest thousand, except when otherwise indicated.

2.2 Basis of consolidation

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries as at December 31, 2016. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if, and only if, the Group has:

- Power over the investee (i.e., existing rights that give it the current ability to direct the relevant activities of the investee)
- Exposure, or rights, to variable returns from its involvement with the investee, and
- The ability to use its power over the investee to affect its returns

When the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- The contractual arrangement with the other vote holders of the investee
- Rights arising from other contractual arrangements
- The Group's voting rights and potential voting rights

2.2 Basis of consolidation (cont'd)

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity while any resultant gain or loss is recognized in profit or loss. Any investment retained is recognized at fair value.

2.3 Significant accounting policies

2.3.1 Cash and cash equivalents

Cash and short-term deposits in the statement of financial position comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less.

2.3.2 Financial instruments – initial recognition and subsequent measurement

(1) Financial assets

1) Initial recognition and measurement
Financial assets are classified, at initial recognition, financial assets within the scope of KIFRS 1039 are classified as financial assets at fair value through profit or loss, loans and receivables, held-to-maturity investments, available-for-sale financial assets, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial assets are recognized initially at fair value plus transactions costs, except in the case of financial assets recorded at fair value through profit or loss.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the marketplace (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

2) Subsequent measurement
The subsequent measurement of financial assets depends on their classification as follows:

Financial assets at fair value through profit or loss
Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. This category includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by KIFRS 1039.

Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with changes in fair value recognized in the statement of comprehensive income.

2.3.2 Financial instruments – initial recognition and subsequent measurement (cont'd)

Derivatives embedded in host contracts are accounted for as separate derivatives and recorded at fair value if their economic characteristics and risks are not closely related to those of the host contracts and the host contracts are not held for trading or designated at fair value through profit or loss. These embedded derivatives are measured at fair value with changes in fair value recognized in profit or loss. Re-assessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss.

Loans and receivables
This category is the most relevant to the Group. Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method, less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of comprehensive income. The losses arising from impairment are recognized in the statement of comprehensive income in finance costs for loans and in cost of sales or other operating expenses for receivables.

Held-to-maturity investments
Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held-to-maturity when the Group has the positive intention and ability to hold them to maturity. After initial measurement, held-to-maturity investments are measured at amortized cost using the EIR, less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of comprehensive income. The losses arising from impairment are recognized in the statement of comprehensive income in finance costs. As at December 31, 2016 and 2015, the Group has no held-to-maturity financial assets, respectively.

Available-for-sale (AFS) financial investments
AFS financial investments include equity investments and debt securities. Equity investments classified as AFS are those that are neither classified as held-for-trading nor designated at fair value through profit or loss. Debt securities in this category are those that are intended to be held for an indefinite period of time and that may be sold in response to needs for liquidity or in response to changes in the market conditions. After initial measurement, available-for-sale financial investments are subsequently measured at fair value with unrealized gains or losses recognized as OCI.

After initial measurement, AFS financial investments are subsequently measured at fair value with unrealized gains or losses recognized as OCI. After initial measurement, AFS financial investments are subsequently measured at fair value with unrealized gains or losses recognized in OCI and credited in the AFS reserve until the investment is derecognized, at which time the cumulative gain or loss is recognized in other operating income, or the investment is determined to be impaired, when the cumulative loss is reclassified from the AFS reserve to the statement of comprehensive income in finance costs. Interest earned whilst holding AFS financial investments is reported as interest income using the EIR method.

The Group evaluates whether the ability and intention to sell its AFS financial assets in the near term is still appropriate. When, in rare circumstances, the Group is unable to trade these financial assets due to inactive markets, the Group may elect to reclassify these financial assets if the management has the ability and intention to hold the assets for the foreseeable future or until maturity.

For a financial asset reclassified from the AFS category, the fair value carrying amount at the date of reclassification becomes its new amortized cost and any previous gain or loss on the asset that has been recognized in equity is amortized to profit or loss over the remaining life of the investment using the EIR. Any difference between the new amortized cost and the maturity amount is also amortized over the remaining life of the asset using the EIR. If the asset is subsequently determined to be impaired, then the amount recorded in equity is reclassified to the statement of comprehensive income.

2.3.2 Financial instruments – initial recognition and subsequent measurement (cont'd)

3) Derecognition
A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the asset is recognized to the extent of the Group's continuing involvement in the asset. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained. Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

(2) Impairment of financial assets

The impairment of financial assets is additionally disclosed in Note 2.5 (Disclosure of significant assumption), Note 6 (Trade receivables and finance lease receivables), Note 7 (Other financial assets) and Note 10 (Available-for-sale financial investments).

The Group assesses, at each reporting date, whether there is objective evidence that a financial asset or a group of financial assets is impaired. An impairment exists if one or more events that has occurred since the initial recognition of the asset (an incurred 'loss event') has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated. Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization and observable data indicating that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

1) Financial assets carried at amortized cost
For financial assets carried at amortized cost, the Group first assesses whether impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If the Group determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognized are not included in a collective assessment of impairment.

The amount of any impairment loss identified is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The present value of the estimated future cash flows is discounted at the financial asset's original EIR. If a loan has a variable interest rate, the discount rate for measuring any impairment loss is the current EIR.

2.3.2 Financial instruments – initial recognition and subsequent measurement (cont'd)

The carrying amount of the asset is reduced through the use of an allowance account and the loss is recognized in the statement of comprehensive income. Interest income (recorded as finance income in the statement of comprehensive income) continues to be accrued on the reduced carrying amount and is accrued using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss. Loans, together with the associated allowance, are written off when there is no realistic prospect of future recovery and all collateral has been realized or has been transferred to the Group. If, in a subsequent year, the amount of the estimated impairment loss increases or decreases because of an event occurring after the impairment was recognized, the previously recognized impairment loss is increased or reduced by adjusting the allowance account. If a write-off is later recovered, the recovery is credited to finance costs in the statement of comprehensive income.

2) Available-for-sale (AFS) financial investments
For AFS financial investments, the Group assesses at each reporting date whether there is objective evidence that an investment or a group of investments is impaired.

In the case of equity investments classified as AFS, objective evidence would include a significant or prolonged decline in the fair value of the investment below its cost. 'Significant' evaluated against the original cost of the investment and 'prolonged' against the period in which the fair value has been below its original cost. Where there is evidence of impairment, the cumulative loss – measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that investment previously recognized in the statement of comprehensive income. – is removed from OCI and recognized in the statement of comprehensive income. Impairment losses on equity investments are not reversed through profit or loss; increases in their fair value after impairment are recognized in OCI.

In the case of debt instruments classified as AFS, impairment is assessed based on the same criteria as financial assets carried at amortized cost. However, the amount recorded for impairment is the cumulative loss measured as the difference between the amortized cost and the current fair value, less any impairment loss on that investment previously recognized in the statement of comprehensive income.

Future interest income continues to be accrued based on the reduced carrying amount of the asset and is accrued using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss. The interest income is recorded as part of finance income. If, in a subsequent year, the fair value of a debt instrument increases and the increase can be objectively related to an event occurring after the impairment loss was recognized in the statement of comprehensive income, the impairment loss is reversed through the statement of comprehensive income.

(3) Financial liabilities

1) Initial recognition and measurement
Financial liabilities within the scope of KIFRS 1039 are classified as financial liabilities at fair value through profit or loss, loans and borrowings, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and financial guarantee contracts.

2) Subsequent measurement
The measurement of financial liabilities depends on their classification as described below:

Financial liabilities at fair value through profit or loss
Financial liabilities at fair value through profit or loss includes financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss.

2.3.2 Financial instruments – initial recognition and subsequent measurement (cont'd)

Financial liabilities are classified as held for trading if they are incurred for the purpose of selling in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by KIFRS 1039. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of comprehensive income.

The Group has not designated any financial liabilities upon initial recognition as at fair value through profit or loss.

Loans and borrowings
After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in the statement of comprehensive income when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of comprehensive income.

Financial guarantee contracts
Financial guarantee contracts issued by the Group are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the best estimate of the expenditure required to settle the present obligation at the reporting date and the amount recognized less cumulative amortization.

3) Derecognition
A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of comprehensive income.

(4) Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

2.3.3 Inventories

Inventories are valued at the lower of cost and net realizable value. Cost of inventories includes purchase costs, conversion costs, and costs incurred in bringing each product to its present location and conditions. The unit cost of inventories is calculated by the weighted-average method. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale.

2.3.4 Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met. When significant parts of property, plant and equipment are required to be replaced at intervals, the Group recognizes such parts as individual assets with specific useful lives and depreciates them accordingly. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in the statement of comprehensive income as incurred. The present value of the expected costs for the decommissioning of an asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met. Property, plant and equipment transferred from customers are initially measured at fair value at the date on which control is obtained.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

	Useful lives
Buildings	14 to 40 years
Structures	7 to 19 years
Machinery	8 to 10 years
Vehicles	5 to 8 years
Tools and equipment	5 to 10 years
Supplies	5 to 19 years
Other tangible assets	3, 5 years
Rental assets	3, 5 years

An item of property, plant and equipment and any significant part initially recognized is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the statement of comprehensive income when the asset is derecognized.

The residual values, useful lives and methods of depreciation of property, plant and equipment are reviewed at each financial year end and adjusted prospectively, if appropriate.

2.3.5 Intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. Internally generated intangible assets, excluding capitalized development costs, are not capitalized and expenditure is reflected in the statement of comprehensive income in the year in which the expenditure is incurred.

The useful lives of intangible assets are assessed as either finite or indefinite. Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each reporting period. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset is accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization expense on intangible assets with finite lives is recognized in the statement of comprehensive income and OCI in the expense category consistent with the function of the intangible asset.

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually, either individually or at the cash-generating unit level. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

Gains or losses arising from de-recognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the statement of comprehensive income when the asset is derecognized.

2.3.5 Intangible assets (cont'd)

A summary of the policies applied to the Group's intangible assets is as follows:

	Useful lives
Industrial property rights	5,10 years
Software	5 years
Other intangible assets	5, 20 years

2.3.6 Investment properties

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at fair value, which reflects market conditions at the reporting date. Gains or losses arising from changes in the fair values of investment properties are included in profit or loss in the period in which they arise, including the corresponding tax effect. Fair values are determined based on an annual evaluation performed by an accredited external, independent valuer, applying a valuation model recommended by the International Valuation Standards Committee.

Investment property is depreciated over an estimated useful life after its residual value is subtracted from an acquisition cost, and buildings are depreciated on a straight-line basis over 40 years.

Investment properties are derecognized either when they have been disposed of or when they are permanently withdrawn from use and no future economic benefit is expected from their disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the statement of comprehensive income in the period of derecognition.

Transfers are made to (or from) investment property only when there is a change in use. For a transfer from investment property to owner-occupied property, the deemed cost for subsequent accounting is the fair value at the date of change in use. If owner-occupied property becomes an investment property, the Group accounts for such property in accordance with the policy stated under property, plant and equipment up to the date of change in use.

2.3.7 Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred measured at acquisition date fair value and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in administrative expenses.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Contingent consideration classified as an asset or liability that is a financial instrument and within the scope of KIFRS 1039 *Financial Instruments: Recognition and Measurement* is measured at fair value with changes in fair value recognized either in either profit or loss or as a change to OCI. Contingent consideration that is classified as equity is not re-measured and subsequent settlement is accounted for within equity. If the contingent consideration is not within the scope of KIFRS 1039, it is measured in accordance with the appropriate KIFRS.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

2.3.7 Business combinations and goodwill (cont'd)

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a cash-generating unit (CGU) and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the CGU retained.

2.3.8 Fair value measurement

The Group measures financial instruments such as derivatives, and non-financial assets such as investment properties at fair value at each balance sheet date.

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. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 : Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 : Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 : Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognized in the financial statements at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Group determines the policies and procedures for both recurring fair value measurement, such as unquoted AFS financial assets, and for non-recurring measurement, such as assets held for distribution in discontinued operation.

External valuers are involved for valuation of significant assets, such as properties and AFS financial assets, and significant liabilities, such as contingent consideration. Involvement of external valuers is decided upon annually by the Valuation Committee after discussion with and approval by the Company's Audit Committee. Selection criteria include market knowledge, reputation, independence and whether professional standards are

2.3.8 Fair value measurement (cont'd)

maintained. Valuers are normally rotated every three years. The Valuation Committee decides, after discussions with the Group's external valuers, which valuation techniques and inputs to use for each case.

At each reporting date, the Valuation Committee analyses the movements in the values of assets and liabilities which are required to be re-measured or re-assessed as per the Group's accounting policies. For this analysis, the Valuation committee verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The Valuation Committee, in conjunction with the Group's external valuers, also compares each the changes in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an interim basis, the Valuation Committee and the Group's external valuers present the valuation results to the Audit Committee and the Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

Fair value related disclosures for financial instruments and non-financial assets that are measured at fair value or where fair values are disclosed are summarized in the following notes:

	Notes
Disclosure for valuation methods, significant estimates and assumptions	2, 36
Quantitative disclosures of fair value measurement hierarchy	2, 36
Unlisted equity investments	36
Investment properties	13
Financial instruments (including those carried at amortized cost)	4, 36

2.3.9 Impairment of non-financial assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year.

Impairment losses of continuing operations, including impairment on inventories, are recognized in the statement of comprehensive income in expense categories consistent with the function of the impaired asset, except for properties previously revalued with the revaluation taken to OCI. For such properties, the impairment is recognized in OCI up to the amount of any previous revaluation.

2.3.9 Impairment of non-financial assets (cont'd)

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the Group estimates the asset's or CGU's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the statement of comprehensive income unless the asset is carried at a revalued amount, in which case, the reversal is treated as a revaluation increase.

The following assets have specific characteristics for impairment testing:

Goodwill
Goodwill is tested for impairment annually as at December 31 and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets
Intangible assets with indefinite useful lives are tested for impairment annually as at December 31 at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

2.3.10 Pension benefits and other post-employment benefits

The Group operates a defined benefit pension plan in Korea, which requires contributions to be made to a separately administered fund. The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method. Re-measurements, comprising of actuarial gains and losses, the effect of the asset ceiling, excluding net interest (not applicable to the Group) and the return on plan assets (excluding net interest), are recognized immediately in the statement of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Re-measurements are not reclassified to profit or loss in subsequent periods.

Past service costs are recognized in profit or loss on the earlier of:

- The date of the plan amendment or curtailment, and
- The date that the Group recognizes restructuring-related costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Group recognizes service costs and net interest expense in the net defined benefit obligation under cost of sales and selling and administrative expenses.

2.3.11 Share-based payments

Employees (including senior executives) of the Group receive remuneration in the form of share-based payments, whereby employees render services as consideration for equity instruments (equity-settled transactions).

The cost of equity-settled transactions is determined by the fair value at the date when the grant is made using an appropriate valuation model (See Note 24). That cost is recognized, together with a corresponding increase in other capital reserves in equity, over the period in which the performance and service conditions are fulfilled in employee benefits expense. The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest. The statement of comprehensive income expense or credit for a period represents the movement in cumulative expense recognized as at the beginning and end of that period and is recognized in employee benefits expense.

2.3.11 Share-based payments (cont'd)

Service and non-market performance conditions are not taken into account when determining the grant date fair value of awards, but the likelihood of the conditions being met is assessed as part of the Group's best estimate of the number of equity instruments that will ultimately vest. Market performance conditions are reflected within the grant date fair value. Any other conditions attached to an award, but without an associated service requirement, are considered to be non-vesting conditions. Non-vesting conditions are reflected in the fair value of an award and lead to an immediate expensing of an award unless there are also service and performance conditions.

No expense is recognized for awards that do not ultimately vest, except for equity-settled transactions for which vesting are conditional upon a market or non-vesting condition. These are treated as vesting irrespective of whether or not the market or non-vesting condition is satisfied, provided that all other performance and service conditions are satisfied.

When the terms of an equity-settled award are modified, the minimum expense recognized is the grand date fair value of the unmodified award, if the original terms of the award are met. An additional expense is recognized for any modification that increases the total fair value of the share-based payment transaction, or is otherwise beneficial to the employee.

When an equity-settled award is cancelled, it is treated as if it vested on the date of cancellation, and any expense not yet recognized for the award is recognized immediately. This includes any award where non-vesting conditions within the control of either the entity or the employee are not met. However, if a new award is substituted for the cancelled award, and designated as a replacement award on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award, as described in the previous paragraph.

The dilutive effect of outstanding options is reflected as additional share dilution in the computation of diluted earnings per share.

2.3.12 Foreign currencies

The Group's consolidated financial statements are presented in Korean won, which is also the parent company's functional currency. For each entity, the Group determines the functional currency and items included in the financial statements of each entity are measured using that functional currency.

Transactions in foreign currencies (other than its functional currency) are initially recorded by the Group at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognized in profit or loss with the exception of monetary items that are designated as part of the hedge of the Group's net investment of a foreign operation. These are recognized in OCI until the net investment is disposed, at which time, the cumulative amount is reclassified to the statement of comprehensive income. Tax charges and credits attributable to exchange differences on those monetary items are also recorded in OCI.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. The gain or loss arising on retranslation of non-monetary items is treated in line with the recognition of gain or loss on change in fair value of the item (i.e., translation differences on items whose fair value gain or loss is recognized in OCI or profit or loss is also recognized in OCI or profit or loss, respectively).

On consolidation, the assets and liabilities of foreign operations are translated into Korean won at the rate of exchange prevailing at the reporting date and their statements of comprehensive income are translated at the exchange rates prevailing at the dates of the transactions. The exchange differences arising on translation for consolidation are recognized in OCI. On disposal of a foreign operation, the component of OCI relating to that particular foreign operation is recognized in profit or loss.

2.3.12 Foreign currencies (cont'd)

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition are treated as assets and liabilities of the foreign operation and translated at the spot rate of exchange at the reporting date.

2.3.13 Current versus non-current classification

The Group presents assets and liabilities in the statement of financial position based on current/non-current classification. An asset is current when it is:

- Expected to be realized or intended to be sold or consumed in the normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realized within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in the normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

2.3.14 Taxes

(1) Current income tax

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, by the reporting date, in the countries where the Group operates and generates taxable income.

Current income tax relating to items recognized directly in equity is recognized in equity and not in the statement of profit or loss and other comprehensive income. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

(2) Deferred tax

Deferred tax is provided using the liability method on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss
- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

2.3.14 Taxes (cont'd)

Deferred tax assets are recognized for all deductible temporary differences, carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss
- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint arrangements, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction either in OCI or directly in equity.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognized subsequently if new information about facts and circumstances change. The adjustment is either treated as a reduction in goodwill (as long as it does not exceed goodwill) if it was incurred during the measurement period or recognized in profit or loss.

2.3.15 Revenue recognition

Revenue is recognized to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured, regardless of when the payment is received. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duty. The Group has concluded that it is the principal in all of its revenue arrangements since it is the primary obligor in all the revenue arrangements, has pricing latitude, and is also exposed to inventory and credit risks.

(1) Sale of goods

Revenue from the sale of goods is recognized when the goods have passed to the buyer, usually on delivery of the goods.

(2) Rendering of services

When the contract outcome can be measured reliably, the revenue is recognized by reference to the stage of completion. When the contract outcome cannot be measured reliably, it is recognized only to the extent that the expenses incurred are eligible to be recovered.

2.3.15 Revenue recognition (cont'd)

(3) Lease contract

Lease is an agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of at the lease's agreement. A lease other than a finance lease is classified as an operating lease. Lease income from operating leases is recognized in income on a straight-line basis over the lease term. Costs, including depreciation, incurred in earning the lease income are recognized as an expense. Initial direct costs incurred by lessors in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized as an expense over the lease term on the same basis as the lease income. The depreciation policy for depreciable leased assets is consistent with the lessor's depreciation policy for similar assets.

(4) Construction contract

Construction contracts as defined in KIFRS 1011 *Construction Contracts* are the contracts specifically negotiated for the construction of an asset. When the outcome of a construction contract can be estimated reliably and it is highly probable that the contract will be profitable, contract revenue is recognized over the period of the contract. The contract cost is recognized as expenses by reference to the stage of completion of the contract, and when loss on the construction contract is expected, the expected loss is immediately recognized as an expense.

When the outcome of a construction contract cannot be estimated reliably, contract revenue is recognized only to the extent of contract costs incurred that are likely to be recoverable. Variations in contract work, claims and incentive payments are included in contract revenue to the extent that may have been agreed with the customer and are capable of being reliably measured. A contact cost is recognized as incurred.

The stage of completion is measured by reference to the contract costs incurred up to the end of the reporting period as a percentage of total estimated costs for each contract. Costs incurred in the year in connection with future activity on a contract are excluded from contract costs in determining the stage of completion. These amounts are recognized as inventories, advances from customers or other assets depending on its nature.

In cases where the aggregate amount of costs incurred and recognized profits (less recognized losses) exceeds progress billings, the total cost incurred plus recognized profits (less recognized losses and progress billings) represents an asset (unbilled amount). In cases where progress billings exceed the aggregate amount of costs incurred and recognized profits (less recognized losses), the aggregate amount of recognized losses plus progress billings (less cost incurred and recognized profits) represents a liability (overbilled amount).

(5) Interest income

Interest income is recognized using the EIR method according to the time passed. When a loan and receivable is impaired, the Group reduces the carrying amount to its recoverable amount and continues unwinding the discount as interest income. Interest income on impaired loans and receivables is recognized using the original EIR.

(6) Dividends

Revenue is recognized when the Group's right to receive the payment is established.

2.3.16 Government grants

Government grants are recognized at their fair values when there is reasonable assurance that the grant will be received and all attached conditions will be complied with. Government grants related to assets are presented by deducting the grants in arriving at the carrying amount of the assets, and grants related to income are deferred and presented by deducting the related expenses for the purpose of the government grants.

2.3.17 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

2.3.18 Treasury shares

Own equity instruments that are reacquired (treasury shares) are recognized at cost and deducted from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Group's own equity instruments. Any difference between the carrying amount and the consideration, if reissued, is recognized in share premium. Share options exercised during the reporting period are satisfied with treasury shares.

2.3.19 Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of comprehensive income net of any reimbursement.

(1) Product warranty provisions

The Group accrues provisions for product warranty, exchange, refund, repairs and after-sales service based on historical experience, with the warranty period of twelve months.

(2) Sales return provisions

The Group accrues provisions for sales return based on historical experience.

(3) Construction warranty provisions

The Group accrues provisions for the obligation to perform warranty repairs after a construction has been completed based on historical experience and terms of construction warranty. The warranty expenses are included in construction costs in the year of construction completion.

2.4 New and amended standards and interpretations

The Group applied for the first time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2016. The nature and the impact of each new standard and amendment are described below:

KIFRS 1114 *Regulatory Deferral Accounts*
KIFRS 1114 is an optional standard that allows an entity, whose activities are subject to rate-regulation, to continue applying most of its existing accounting policies for regulatory deferral account balances upon its first-time adoption of KIFRS. Entities that adopt KIFRS 1114 must present the regulatory deferral accounts as separate line items on the statement of financial position and present movements in these account balances as separate line items in the statement of profit or loss and OCI. The standard requires disclosure of the nature of, and risks associated with, the entity's rate-regulation and the effects of that rate-regulation on its financial statements. Since the Group is an existing KIFRS preparer and is not involved in any rate-regulated activities, this standard does not apply.

Amendments to KIFRS 1111 *Joint Arrangements*: *Accounting for Acquisitions of Interests*
The amendments to KIFRS 1111 require that a joint operator accounting for the acquisition of an interest in a joint operation, in which the activity of the joint operation constitutes a business, must apply the relevant KIFRS 1103 *Business Combinations* principles for business combination accounting. The amendments also clarify that a previously held interest in a joint operation is not remeasured on the acquisition of an additional interest in the same joint operation if joint control is retained. In addition, a scope exclusion has been added to KIFRS 1111

2.4 New and amended standards and interpretations (cont'd)

to specify that the amendments do not apply when the parties sharing joint control, including the reporting entity, are under common control of the same ultimate controlling party. The amendments apply to both the acquisition of the initial interest in a joint operation and the acquisition of any additional interests in the same joint operation and are applied prospectively. These amendments do not have any impact on the Group as there has been no interest acquired in a joint operation during the period.

Amendments to KIFRS 1016 and KIFRS 1038 *Clarification of Acceptable Methods of Depreciation and Amortisation*
The amendments clarify the principle in KIFRS 1016 *Property, Plant and Equipment* and KIFRS 1038 *Intangible Assets* that revenue reflects a pattern of economic benefits that are generated from operating a business (of which the asset is a part) rather than the economic benefits that are consumed through use of the asset. As a result, a revenue-based method cannot be used to depreciate property, plant and equipment and may only be used in very limited circumstances to amortise intangible assets. The amendments are applied prospectively and do not have any impact on the Group, given that it has not used a revenue-based method to depreciate its non-current assets.

Amendments to KIFRS 1027 *Equity Method in Separate Financial Statements*
The amendments allow entities to use the equity method to account for investments in subsidiaries, joint ventures and associates in their separate financial statements. Entities already applying KIFRS and electing to change to the equity method in their separate financial statements have to apply that change retrospectively. These amendments do not have any impact on the Group's consolidated financial statements.

Annual Improvements *2012-2014 Cycle*
These amendments are effective for fiscal years beginning after January 1, 2016. The improvements include:

KIFRS 1105 *Non-current Assets Held for Sale and Discontinued Operations*
Assets (or disposal groups) are generally disposed of either through sale or distribution to the owners. The amendment clarifies that changing from one of these disposal methods to the other would not be considered a new plan of disposal, rather it is a continuation of the original plan. There is, therefore, no interruption of the application of the requirements in KIFRS 1105. This amendment is applied prospectively.

KIFRS 1107 *Financial Instruments: Disclosures*
(i) Servicing contracts
The amendment clarifies that a servicing contract that includes a fee can constitute continuing involvement in a financial asset. An entity must assess the nature of the fee and the arrangement against the guidance for continuing involvement in KIFRS 1107 in order to assess whether the disclosures are required. The assessment of which servicing contracts constitute continuing involvement must be made retrospectively. However, the required disclosures need not be provided for any period beginning before the annual period in which the entity first applies the amendments.

(ii) Applicability of the amendments to KIFRS 1107 to condensed interim financial statements
The amendment clarifies that the offsetting disclosure requirements do not apply to condensed interim financial statements, unless such disclosures provide a significant update to the information reported in the most recent annual report. This amendment is applied retrospectively.

KIFRS 1019 *Employee Benefits*
The amendment clarifies that market depth of high quality corporate bonds is assessed based on the currency in which the obligation is denominated, rather than the country where the obligation is located. When there is no deep market for high quality corporate bonds in that currency, government bond rates must be used. This amendment is applied prospectively.

KIFRS 1034 *Interim Financial Reporting*
The amendment clarifies that the required interim disclosures must either be in the interim financial statements or incorporated by cross-reference between the interim financial statements and wherever they are included within the interim financial report (e.g., in the management commentary or risk report). The other information within the interim financial report must be available to users on the same terms as the interim financial statements and at the same time. This amendment is applied retrospectively.

2.4 New and amended standards and interpretations (cont'd)

Amendments to KIFRS 1001 *Disclosure Initiative*
The amendments to KIFRS 1001 clarify, rather than significantly change, existing KIFRS 1001 requirements. The amendments clarify:

- The materiality requirements in KIFRS 1001
- That specific line items in the statement(s) of profit or loss and OCI and the statement of financial position may be disaggregated
- That entities have flexibility as to the order in which they present the notes to financial statements
- That the share of OCI of associates and joint ventures accounted for using the equity method must be presented in aggregate as a single line item, and classified between those items that will or will not be subsequently reclassified to profit or loss

Furthermore, the amendments clarify the requirements that apply when additional subtotals are presented in the statement of financial position and the statement(s) of profit or loss and OCI. These amendments do not have any impact on the Group.

2.5 Significant accounting judgments, estimates and assumptions

The preparation of the Group's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the assets or liabilities affected in future periods.

Other disclosures relating to the Group's exposure to risks and uncertainties include:

• Financial instruments risk management and policies	Note 37
• Sensitivity analyses disclosures	Notes 17 and 37

2.5.1 Accounting judgments

In the process of applying the Group's accounting policies, management has made the following judgments, which have the most significant effect on the amounts recognized in the financial statements:

(1) Lease commitments – Group as lessor

The Group has entered into lease contracts on the rental assets as a provider. The Group has determined, based on an evaluation of the terms and conditions of the arrangements, that the lease contracts are operating leases if they retain the significant portions of risks and rewards of these rental assets. However, if the significant portions of risks and rewards of the rental assets are transferred to a lessee, the Group classified the contracts as finance leases at the inception of the lease.

2.5.2 Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Group based its assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

(1) Impairment of non-financial assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. Goodwill and intangible assets with indefinite useful lives are tested for impairment annually, or when circumstances indicate that the carrying value may be impaired. Other non-financial assets are tested for impairment when circumstances indicate that its carrying amount may not be recoverable. In determining a value in use, management estimates future cash flows to be derived from the asset or CGU, and applies the appropriate discount rate to those future cash flows.

2.5.2 Estimates and assumptions (cont'd)

(2) Share-based payments

The Group measures the cost of equity-settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted. Estimating fair value for share-based payment transactions requires determination of the most appropriate valuation model, which is dependent on the terms and conditions of the grant. This estimate also requires determination of the most appropriate inputs to the valuation model including the expected life of the share option, volatility and dividend yield and making assumptions about them. The assumptions and models used for estimating fair value for share-based payment transactions are disclosed in Note 25.

(3) Defined benefit plans (pension benefits)

The cost of the defined benefit pension plan and other post-employment medical benefits and the present value of the pension obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexities involved in the valuation and its long-term nature, the defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

In determining the appropriate discount rate, management considers the interest rates of corporate bonds in currencies consistent with the currencies of the post-employment benefit obligation with at least an 'AA' rating or above, as set by an internationally acknowledged rating agency. The mortality rate is based on publicly available mortality tables for the specific countries. Future salary increases and pension increases are based on expected future inflation rates for the respective countries.

2.6 Standards issued but not yet effective

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below. The Group intends to adopt these standards, if applicable, when they become effective.

KIFRS 1109 *Financial Instruments*
The KASB issued the final version of KIFRS 1109 *Financial Instruments* that replaces KIFRS 1039 *Financial Instruments: Recognition and Measurement* and all previous versions of KIFRS 1109. KIFRS 1109 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. KIFRS 1109 is effective for annual periods beginning on or after January 1, 2018, with early application permitted. Except for hedge accounting, retrospective application is required but providing comparative information is not compulsory. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions. The Group plans to adopt the new standard on the required effective date.

In connection with the adoption of KIFRS 1109, the Group has not yet undertaken any update on its internal control processes or a change in the accounting system related to the reporting of financial instruments, and has not been able to analyze the financial impact of the new standard on the financial statements; however, the general impacts on the financial statements are as follows:

(i) Financial asset classification and measurement
The new KIFRS 1109 requires a financial instrument to be classified and measured subsequently at amortized cost, fair value through other comprehensive income (FVOCI), or fair value through profit or loss (FVTPL), on the basis of the holder's business model and instrument's contractual cash flow characteristics as shown below. The requirements should be applied to an entire financial asset, even if it contains an embedded derivative. That is, in contrast with the requirements of KIFRS 1039, a derivative embedded within a hybrid (combined) contract containing a financial asset host is not accounted for separately.

2.6 Standards issued but not yet effective (cont'd)

	Contractual cash flow characteristics	
Business model	Composed solely of principal and interest	For other cases
Purpose of collecting contractual cash flows	Measured at amortized cost (*1)	Measured at FVTPL (*2)
Purpose of collecting and selling contractual cash flows	Measured at FVOCI (*1)	
Purpose of selling, others	Measured at FVTPL	

(*1) An entity may irrevocably designate a financial asset as measured at FVTPL if doing so eliminates or reduces an accounting mismatch.
(*2) An entity may make an irrevocable election to present in other comprehensive income changes in the fair value of an investment in an equity instrument that is not held for trading.

The requirements for classifying the financial assets as measured at amortized cost or FVOCI under KIFRS 1109 are more stringent than the requirements of the current KIFRS 1039; as a result, the increase in the proportion of financial assets subject to FVTPL measurement may increase the volatility in profit or loss upon adoption of KIFRS 1109.

As at December 31, 2016, the Group has loans and receivables amounting to ₩636,576 million, and AFS financial assets amounting to ₩2,464 million.

According to KIFRS 1109, an entity may make an irrevocable election to present in other comprehensive income changes in the fair value of an investment in an equity instrument that is not held for trading. Items of comprehensive income are not subsequently recycled to profit or loss. As at December 31, 2016, the Group holds equity instruments of ₩2,464 million classified as available-for-sale financial assets.

(ii) Financial liabilities classification and measurement
In KIFRS 1109, fair value changes of financial liabilities at FVTPL attributable to changes in credit risk of the liability shall be presented in other comprehensive income, not in profit or loss. Amounts presented in other comprehensive income shall not be subsequently transferred to profit or loss. However, the new standard allows the recognition of the full amount of changes in the fair value in profit or loss only if the presentation of the changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss.

The fair value changes of financial liabilities designated at FVTPL that were previously recognized as profit or loss in KIFRS 1039 will partially be recorded as other comprehensive income and thus profit or loss related to the evaluation of financial liabilities may decrease.

(iii) Impairment: financial assets and contract assets
In KIFRS 1039, impairment is recognized only when there is objective evidence of impairment based on incurred loss model. In the new KIFRS 1109, impairment of debt instruments, lease bonds, contract assets, loan commitments and financial guarantee contracts that are measured at amortized costs or at FVOCI is recognized based on the expected credit loss (ECL) impairment model.

KIFRS 1109 outlines a 'three-stage' model for impairment based on changes in credit risk since initial recognition. Loss allowance is measured based on the 12-month ECL or life time ECL which allows early recognition of credit loss compared to the incurred loss model of KIFRS 1039.

2.6 Standards issued but not yet effective (cont'd)

Classification (*1)		Loss allowance
Stage 1	Assets with no significant increase in credit risk since initial recognition (*2)	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date.
Stage 2	Assets with significant increase in credit risk since initial recognition	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument.
Stage 3	Credit-impaired assets	

(*1) For trade receivables or contract assets in accordance with KIFRS 1115 *Revenue from Contracts with Customers*, which does not contain a significant financing component, the Group is to measure the loss allowance at an amount equal to lifetime expected credit losses; however, if it contains a significant financial component, the Group can choose as its accounting policy to measure the loss allowance at an amount equal to lifetime expected credit losses. For lease receivables, the Group may choose as its accounting policy to measure the loss allowance at an amount equal to lifetime expected credit losses.
(*2) Low credit risk at the end of reporting period may be considered as no significant increase in credit risk.

In KIFRS 1109, only the accumulated changes in the life time ECL after initial recognition are taken into account as loss allowance in case credit is impaired at initial recognition of financial assets.

As at December 31, 2016, the Group has loans and receivables amounting to ₩636,576 million measured at amortized cost. Allowance for losses on these assets is set at ₩81,976 million.

KIFRS 1115 *Revenue from Contracts with Customers*
KIFRS 1115 establishes a five-step model to account for revenue arising from contracts with customers. Under KIFRS 1115, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The new revenue standard will supersede all current revenue recognition requirements under KIFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after 1 January 2018. Early adoption is permitted. The Group plans to adopt the new standard on the required effective date using the full retrospective method. For the year ended December 31, 2016, the Group performed a preliminary assessment of KIFRS 1115, which is subject to changes arising from a more detailed ongoing analysis.

The current KIFRS 1018 provides revenue recognition criteria for different types of transactions such as sales of goods, provision of services, interest income, royalty income, dividend income, and construction contracts. However under the new KIFRS 1115, revenue is recognized by applying a five-step revenue recognition model to all types of contracts.
The five-step revenue recognition model is as follows:

1. Identify the contract(s) 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
5. Recognize revenue when (or as) the entity satisfies a performance obligation

In order to review the impact of the adoption of the new standard on the financial statements as at December 31, 2016, the Group is in the process of preparing an introduction preparation team consisting of members of the accounting and computing departments. The Group is planning to analyze the financial impact of the adoption of KIFRS 1115 in 2017.

The general effects on the consolidated financial statements are as follows: However, the following discussion does not include all possible impacts and may be subject to future analysis.

1) Determining the transaction price

The Group mainly manufactures and sells water purifiers and home appliances. For the year ended December 31, 2016, rental business, outright sales and other three operating segments revenues amounted to ₩2,376,328 million.

2.6 Standards issued but not yet effective (cont'd)

The transaction price is the amount of consideration in a contract to which an entity expects to be entitled in exchange for transferring promised goods and services to a customer. The transaction price is an estimate of what the company expects to receive in the future, not the amount agreed with the customer in the contract. If the amount agreed with the customer includes the amount of change such as discount, price concessions, incentives and others, the transaction price consists of a fixed price and a variable price, and estimates the transaction price by estimating the variable price as one of the expected or most likely value.

In applying KIFRS 1115, the Group is required to estimate variable costs using the method that it expects to better anticipate the amount to be entitled, and to recognize the cumulative amount of revenue that it has already recognized when fulfilling its obligations such as returns and refunds. The revenue is recognized only to the extent that it is highly probable that no significant portion will be reversed and the variable price is included in the transaction price. Amounts that the Group does not expect to be entitled will be recognized as a refund liability.

2) Identification of performance obligations and allocation of transaction prices

For a term-base sales contract, multiple contractual obligations can be identified in a single contract. In such cases, the transaction price should be allocated to each performance obligation and the revenue recognized for each performance obligation performed. If there is more than one performance obligation, the transaction price is distributed to each performance obligation based on the relative individual selling price. In this case, the individual selling price means the price when the company sells separately the goods or services promised to the customer, and if a stand-alone selling price is not directly observable, suitable methods for estimating the stand-alone selling price of goods and services include, but are not limited to, the following:

Method	Detail
Adjusted market assessment approach	The Group evaluates the market in which it sells goods or services and estimate the price that a customer in that market would be willing to pay for those goods or services.
Expected cost plus a margin approach	The Group forecasts expected costs of satisfying a performance obligation and then add an appropriate margin for that goods or services.
Residual approach	The Group estimates the stand-alone selling price by reference to the total transaction price less the sum of the observable stand-alone selling prices of other goods and services promised in the contract.

In applying KIFRS 1115, the Group allocates transaction prices based on the relative stand-alone selling prices to the various performance obligations identified in one contract. The Group will apply the most reasonable approach to estimate the stand-alone selling price of each performance obligation.

Amendments to KIFRS 1110 and KIFRS 1028 *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*
The amendments address the conflict between KIFRS 1110 and KIFRS 1028 in dealing with the loss of control of a subsidiary that is sold or contributed to an associate or joint venture. The amendments clarify that the gain or loss resulting from the sale or contribution of assets that constitute a business, as defined in KIFRS 1103, between an investor and its associate or joint venture, is recognized in full. Any gain or loss resulting from the sale or contribution of assets that do not constitute a business, however, is recognized only to the extent of unrelated investors' interests in the associate or joint venture. The IASB has deferred the effective date of these amendments indefinitely, but an entity that early adopts the amendments must apply them prospectively. The Group will apply these amendments when they become effective.

Amendments to KIFRS 1007 *Statement of Cash Flows: Disclosure Initiative*
The amendments to KIFRS 1007 *Statement of Cash Flows* are part of the IASB's Disclosure Initiative and require an entity to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. On initial application of the amendment, entities are not required to provide comparative information for preceding periods. These amendments are effective for annual periods beginning on or after 1 January 2017, with early application permitted. Application of the amendments will result in additional disclosures provided by the Group.

2.6 Standards issued but not yet effective (cont'd)

Amendments to KIFRS 1012 *Recognition of Deferred Tax Assets for Unrealised Losses*
The amendments clarify that an entity needs to consider whether tax law restricts the sources of taxable profits against which it may make deductions on the reversal of that deductible temporary difference. Furthermore, the amendments provide guidance on how an entity should determine future taxable profits and explain the circumstances in which taxable profit may include the recovery of some assets for more than their carrying amount.

Entities are required to apply the amendments retrospectively. However, on initial application of the amendments, the change in the opening equity of the earliest comparative period may be recognized in the opening retained earnings (or in another component of equity, as appropriate), without allocating the change between opening retained earnings and other components of equity. Entities applying this relief must disclose that fact. These amendments are effective for annual periods beginning on or after 1 January 2017 with early application permitted. If an entity applies the amendments for an earlier period, it must disclose that fact. These amendments are not expected to have any impact on the Group.

Amendments to KIFRS 1102 *Classification and Measurement of Share-based Payment Transactions*
The IASB issued amendments to KIFRS 1102 *Share-based Payment* that address three main areas: the effects of vesting conditions on the measurement of a cash-settled share-based payment transaction; the classification of a share-based payment transaction with net settlement features for withholding tax obligations; and accounting where a modification to the terms and conditions of a share-based payment transaction changes its classification from cash settled to equity settled.

On adoption, entities are required to apply the amendments without restating prior periods, but retrospective application is permitted if elected for all three amendments and other criteria are met. The amendments are effective for annual periods beginning on or after 1 January 2018, with early application permitted. The Group is assessing the potential effect of the amendments on its consolidated financial statements.

3. Segment information

Details of the Group's reportable segments are as follows:

The management in strategic decision making of the Group determines the Group's operating segments. The management monitors operating results of its operating segments separately for the purpose of making decision about resource allocation and performance assessment. The management has responsibilities of evaluating the resource allocation and performance of each segment.

Operating segments are organized based on its products and services and has three reportable segments, as follows:

Operating segments	Principal activity
Rental	Rental service of water purifiers, bidets and others including regular services to customers with membership
Outright sales	Sales of water purifiers, bidets, cosmetics and others to customers
Others	Construction contracts for water management facilities and others

Most of the Group's operations are conducted within Korea and, with regards to the rental segment, some lease products or goods are exported to the United States, China, Malaysia and others.

3. Segment information (cont'd)

Financial performance information by segment for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016			
	Rental	Outright sales	Others	Total
Sales	₩ 1,865,291,623	₩ 538,013,191	₩ 83,649,281	₩ 2,486,954,095
Inter-segment revenue	-	(106,887,317)	(3,738,611)	(110,625,928)
Revenue from external customers	1,865,291,623	431,125,874	79,910,670	2,376,328,167
Gross profit	1,354,481,480	198,103,382	11,566,779	1,564,151,641

	2015			
	Rental	Outright sales	Others	Total
Sales	₩ 1,830,707,970	₩ 457,428,963	₩ 112,021,343	₩ 2,400,158,276
Inter-segment revenue	-	(73,219,040)	(11,696,953)	(84,915,993)
Revenue from external customers	1,830,707,970	384,209,923	100,324,390	2,315,242,283
Gross profit	1,364,057,086	196,106,131	26,235,973	1,586,399,190

Sales by geographic region for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016			
	Domestic	U.S.A	Asia	Total
Total revenue	₩ 2,264,885,604	₩ 60,206,737	₩ 161,861,754	₩ 2,486,954,095
Internal revenue	(110,625,928)	-	-	(110,625,928)
Net revenue	2,154,259,676	60,206,737	161,861,754	2,376,328,167
Tangible assets, intangible assets and investment properties	814,505,162	10,427,062	61,058,717	885,990,941

	2015			
	Domestic	U.S.A	Asia	Total
Total revenue	₩ 2,226,220,190	₩ 57,234,598	₩ 116,703,488	₩ 2,400,158,276
Internal revenue	(84,915,993)	-	-	(84,915,993)
Net revenue	2,141,304,197	57,234,598	116,703,488	2,315,242,283
Tangible assets, intangible assets and investment properties	830,537,076	14,122,854	46,812,173	891,472,103

No external customers account for more than 10% of the Group's sales for the years ended December 31, 2016 and 2015, respectively.

4. Financial instruments by category

The Group's financial instruments by category as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016			
	Loans and receivables	Available-for-sale financial assets	Financial liabilities measured at amortized cost	Total
Assets:				
Cash and cash equivalents	₩ 66,306,979	₩ -	₩ -	₩ 66,306,979
Short-term trade receivables	292,776,989	-	-	292,776,989
Finance lease receivables	33,338,985	-	-	33,338,985
Other short-term financial assets	62,705,777	-	-	62,705,777
Long-term trade receivables	23,612,266	-	-	23,612,266
Finance lease receivables	104,994,760	-	-	104,994,760
Other long-term financial assets	52,840,420	-	-	52,840,420
Available-for-sale assets	-	2,464,020	-	2,464,020
	₩ 636,576,176	₩ 2,464,020	₩ -	₩ 639,040,196
Liabilities:				
Trade payables	₩ -	₩ -	₩ 58,724,469	₩ 58,724,469
Other short-term financial liabilities	-	-	181,218,579	181,218,579
Short-term borrowings	-	-	340,000,000	340,000,000
Other long-term financial liabilities	-	-	2,664,966	2,664,966
Long-term borrowings	-	-	11,812,000	11,812,000
	₩ -	₩ -	₩ 594,420,014	₩ 594,420,014

4. Financial instruments by category (cont'd)

	2015			
	Loans and receivables	Available-for-sale financial assets	Financial liabilities measured at amortized cost	Total
Assets:				
Cash and cash equivalents	₩ 116,307,900	₩ -	₩ -	₩ 116,307,900
Trade receivables	256,015,920	-	-	256,015,920
Finance lease receivables	8,955,735	-	-	8,955,735
Other short-term financial assets	15,398,219	-	-	15,398,219
Finance lease receivables	28,144,342	-	-	28,144,342
Other long-term financial assets	52,068,160	-	-	52,068,160
Available-for-sale assets	-	2,430,096	-	2,430,096
	₩ 476,890,276	₩ 2,430,096	₩ -	₩ 479,320,372
Liabilities:				
Trade payables	₩ -	₩ -	₩ 59,799,441	₩ 59,799,441
Other short-term financial liabilities	-	-	183,985,891	183,985,891
Short-term borrowings	-	-	80,040,719	80,040,719
Other long-term financial liabilities	-	-	2,203,221	2,203,221
Long-term borrowings	-	-	7,951,000	7,951,000
	₩ -	₩ -	₩ 333,980,272	₩ 333,980,272

Gains or losses on financial instruments by category for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Loans and receivables:		
Interest income	₩ 1,210,335	₩ 1,423,153
Gain on foreign currency translation	9,062,161	6,286,033
Loss on foreign currency translation	(811,204)	(11,714)
Loss on impairment of trade receivables	(11,898,721)	(20,454,788)
Loss on impairment of other receivables	(2,906,817)	(1,365,204)
Available-for-sale financial assets:		
Gain or loss on valuation (OCI) (*1)	20,867	9,879
Dividend income	1,990	-
Gain on disposal of available-for-sales	-	23
Loss on disposal of available-for-sales	(1)	-
Financial liabilities measured at amortized cost:		
Interest expenses	(6,103,169)	(4,339,055)
Gain on foreign exchange translation	7,613,355	3,296,765
Loss on foreign exchange translation	(12,119,803)	(13,382,033)

(*1) Represents net of related income tax.

The Group accounted for ₩5,815 million (2015: ₩4,822 million) of gain on foreign exchange transactions and ₩11,511 million (2015: ₩3,897 million) of loss on foreign exchange transactions from trade receivables, other short-term financial assets, other long-term financial assets and trade payables denominated in foreign currencies.

5. Cash and cash equivalents

Details of cash and cash equivalents as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Cash	₩	57,931	₩	50,905
Checking account		32,928,263		76,931,876
Savings account		33,267,380		39,280,494
Other cash equivalents		53,405		44,625
	₩	66,306,979	₩	116,307,900

6. Trade receivables and finance lease receivables

Trade receivables and finance lease receivables as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Current:				
Trade receivables	₩	338,838,070	₩	300,535,267
Less: present value discount of trade receivables		(380,471)		-
Less: allowance for doubtful accounts		(45,680,610)		(44,519,347)
Finance lease receivables		34,537,926		9,652,644
Less: present value discount of lease receivables		(686,969)		(184,937)
Less: allowance for doubtful accounts		(511,971)		(511,971)
	₩	326,115,975	₩	264,971,656
Non-current:				
Trade receivables	₩	33,732,299	₩	8,069,052
Less: present value discount of trade receivables		(2,050,980)		-
Less: allowance for doubtful accounts		(8,069,052)		(8,069,052)
Finance lease receivables		122,806,150		34,962,512
Less: present value discount of lease receivables		(15,761,660)		(4,768,442)
Less: allowance for doubtful accounts		(2,049,730)		(2,049,730)
	₩	128,607,027	₩	28,144,342

The aging analyses of trade receivables and finance lease receivables as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Receivables not past due	₩	442,802,471	₩	279,940,185
Past due but not impaired:				
Less than 6 months		30,036,746		15,053,433
6 to 12 months		739,614		3,038,400
More than 12 months		24,251		37,357
		30,800,611		18,129,190
Impaired		56,311,363		55,150,100
	₩	529,914,445	₩	353,219,475

6. Trade receivables and finance lease receivables (cont'd)

Changes in the allowance for doubtful accounts of trade receivables and finance lease receivables for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
As at January 1	₩	55,150,100	₩	46,542,595
Impairment loss		11,898,721		20,454,788
Write-off of uncollectable amounts		(11,006,010)		(8,993,649)
Reversal of write-off		57,227		-
Changes in the scope of consolidation		-		(2,300,455)
Exchange difference and others		211,325		(553,179)
As at December 31	₩	56,311,363	₩	55,150,100

7. Other financial assets

Details of other financial assets as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Other short-term financial assets:				
Short-term financial assets	₩	42,001,384	₩	-
Short-term loans		112,728		263,609
Other receivables		43,071,871		35,160,374
Accrued income		-		416
Less: provision for impairment loss		(22,480,206)		(20,026,180)
	₩	62,705,777	₩	15,398,219
Other long-term financial assets:				
Long-term financial instruments	₩	9,336,736	₩	8,982,813
Long-term loans		-		500,000
Guarantee deposits		43,508,194		42,658,448
Other long-term trade and other receivables		3,179,073		3,179,073
Others		490		490
Less: provision for impairment loss		(3,184,073)		(3,252,664)
	₩	52,840,420	₩	52,068,160

Impairment has occurred from refund receivables for sales commission and leasehold deposits in other financial assets. The Group recognizes the impairment loss on these other financial assets by conducting an individual analysis.

Most of the other short-term financial assets are less than one year, and most of the other long-term financial assets are between one and two years. Since other financial assets are spread to various customers, there is no significantly concentrated exposure to credit risk.

Changes in the allowance for doubtful accounts of other financial assets for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Other short-term financial assets:				
As at January 1	₩	20,026,180	₩	20,624,725
Impairment loss		2,811,817		1,296,614
Disposal of impaired receivables		(358,462)		(6,412)
Exchange difference and others		671		(1,888,747)
As at December 31		22,480,206		20,026,180
Other long-term financial assets:				
As at January 1		3,252,663		3,184,073
Impairment loss		95,000		68,591
Write-off of uncollectable amounts		(163,590)		-
As at December 31	₩	3,184,073	₩	3,252,664

8. Other assets

Details of other assets as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Other current assets:				
Advance payments	₩	9,547,193	₩	11,470,231
Prepaid expenses		186,253,948		160,973,013
Due from customers for construction contract		9,602,704		12,251,705
Others		927,977		996,021
	₩	206,331,822	₩	185,690,970
Other non-current assets:				
Long-term prepaid expenses	₩	157,172,947	₩	146,956,260
Others		124,330		124,330
	₩	157,297,277	₩	147,080,590

9. Inventories

Details of inventories as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016					
		Acquisition cost		Valuation allowance		Net book value
Merchandise	₩	45,959,873	₩	(7,385,489)	₩	38,574,384
Finished goods		43,985,266		(22,423,317)		21,561,949
Work-in-process		242,573		(25)		242,548
Raw materials		5,366,367		(283,128)		5,083,239
Materials in transit		4,698,941		-		4,698,941
Others		33,604		-		33,604
	₩	100,286,624	₩	(30,091,959)	₩	70,194,665

	2015					
		Acquisition cost		Valuation allowance		Net book value
Merchandise	₩	44,840,683	₩	(5,455,129)	₩	39,385,554
Finished goods		25,734,213		(4,049,777)		21,684,436
Work-in-process		364,546		-		364,546
Raw materials		5,519,917		(221,116)		5,298,801
Materials in transit		3,022,141		-		3,022,141
Others		65,331		-		65,331
	₩	79,546,831	₩	(9,726,022)	₩	69,820,809

10. Available-for-sale financial assets

Details of available-for-sale financial assets as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016						2015	
		Acquisition cost		Fair value		Book value		Book value
Unmarketable equity securities	₩	4,237,701	₩	2,464,020	₩	2,464,020	₩	2,430,096

10. Available-for-sale financial assets (cont'd)

The Group presents available-for-sale financial assets at acquisition cost less any impairment when the fair value cannot be determined reliably or difference between the fair value and book value is not significant. Loss on impairment of unmarketable securities amounted to nil and ₩1,800 million for the years ended December 31, 2016 and 2015, respectively.

Changes in available-for-sale financial assets for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
As at January 1	₩ 2,430,095	₩ 2,417,367
Disposals	-	(170)
Others	7,171	232
Gain on valuation directly recognized in equity	26,753	12,666
As at December 31	2,464,019	2,430,095
Less: non-current portion	(2,464,019)	(2,430,095)
Current portion	₩ -	₩ -

11. Property, plant and equipment

Details of property, plant and equipment as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016			
	Acquisition cost	Accumulated depreciation and impairment	Government grants	Book value
Land	₩ 34,716,727	₩ -	₩ -	₩ 34,716,727
Buildings	37,989,123	(8,086,342)	(226,223)	29,676,558
Structures	3,291,468	(1,872,045)	-	1,419,423
Machinery and equipment	32,501,915	(17,026,063)	-	15,475,852
Vehicles	983,480	(886,275)	-	97,205
Tools	162,455,698	(123,404,742)	-	39,050,956
Furniture and fixtures	91,674,118	(77,569,426)	-	14,104,692
Rental assets	1,006,564,243	(479,841,850)	-	526,722,393
Others	25,325,580	(19,256,618)	(8,452)	6,060,510
Construction-in-progress	2,078,864	-	-	2,078,864
	₩ 1,397,581,216	₩ (727,943,361)	₩ (234,675)	₩ 669,403,180

	2015			
	Acquisition cost	Accumulated depreciation and impairment	Government grants	Book value
Land	₩ 37,523,496	₩ -	₩ -	₩ 37,523,496
Buildings	46,644,053	(7,973,812)	-	38,670,241
Structures	3,335,274	(1,564,830)	-	1,770,444
Machinery and equipment	32,430,520	(15,716,272)	-	16,714,248
Vehicles	949,933	(819,622)	-	130,311
Tools	146,894,607	(104,714,923)	-	42,179,684
Furniture and fixtures	99,161,320	(83,035,725)	-	16,125,595
Rental assets	1,001,466,213	(471,262,057)	-	530,204,156
Others	22,801,032	(18,412,543)	(52,739)	4,335,750
Construction-in-progress	25,217,110	-	(13,359,173)	11,857,937
	₩ 1,416,423,558	₩ (703,499,784)	₩ (13,411,912)	₩ 699,511,862

11. Property, plant and equipment (cont'd)

Changes in the book value of property, plant and equipment for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016						
	Jan.1	Acquisition and capital expenditures	Disposal, termination and impairment	Depreciation	Transfer (*1)	Exchange difference	Dec.31
Land	₩ 37,523,496	₩ 71,792	₩ -	₩ -	₩ (2,878,561)	₩ -	₩ 34,716,727
Buildings	38,670,241	21,376	-	(1,164,005)	(7,851,054)	-	29,676,558
Structures	1,770,444	34,100	(1)	(385,120)	-	-	1,419,423
Machinery and equipment	16,714,248	1,517,345	(229,277)	(2,956,950)	455,932	(25,446)	15,475,852
Vehicles	130,311	37,167	-	(69,866)	-	(407)	97,205
Tools	42,179,684	12,175,687	(2,999,591)	(16,247,174)	3,943,761	(1,411)	39,050,956
Furniture and fixtures	16,125,595	4,200,810	(98,646)	(6,064,353)	-	(58,714)	14,104,692
Rental assets	530,204,156	298,456,386	(99,697,131)	(195,939,074)	(4,506,186)	(1,795,758)	526,722,393
Others	4,335,750	2,325,152	(413)	(1,811,927)	1,210,099	1,849	6,060,510
Construction-in-progress (*2)	11,857,937	7,421,390	-	-	(17,200,463)	-	2,078,864
	₩ 699,511,862	₩ 326,261,205	₩ (103,025,059)	₩ (224,638,469)	₩ (26,826,472)	₩ (1,879,887)	₩ 669,403,180

(*1) Differences between transfer-in and transfer-out of tangible assets were transferred to inventories, intangible assets and investment properties.
(*2) Borrowing costs capitalized into construction-in-progress are ₩310,271 thousand for the year ended December 31, 2016.

	2015						
	Jan.1	Acquisition and capital expenditures	Disposal, termination and impairment	Depreciation	Transfer (*1)	Exchange difference	Dec.31
Land	₩ 37,523,496	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 37,523,496
Buildings	39,834,211	71,999	-	(1,235,969)	-	-	38,670,241
Structures	1,641,296	523,447	-	(394,299)	-	-	1,770,444
Machinery and equipment	16,943,910	1,066,362	(4,321)	(2,814,507)	1,610,800	(87,996)	16,714,248
Vehicles	174,707	47,707	-	(78,800)	-	(13,303)	130,311
Tools	41,687,681	14,001,775	(1,172,130)	(16,918,470)	4,589,258	(8,430)	42,179,684
Furniture and fixtures	20,405,449	4,904,618	(953,177)	(7,953,873)	-	(277,422)	16,125,595
Rental assets	496,544,726	285,817,931	(55,942,302)	(188,224,342)	(4,205,339)	(3,786,518)	530,204,156
Others	4,202,851	1,892,179	(4)	(2,143,687)	386,701	(2,290)	4,335,750
Construction-in-progress (*2)	16,229,538	2,215,158	-	-	(6,586,759)	-	11,857,937
	₩ 675,187,865	₩ 310,541,176	₩ (58,071,934)	₩ (219,763,947)	₩ (4,205,339)	₩ (4,175,959)	₩ 699,511,862

(*1) Differences between transfer-in and transfer-out of tangible assets were transferred to inventories.
(*2) Borrowing costs capitalized into construction-in-progress were ₩380,894 thousand for the year ended December 31, 2015.

Operating lease commitments
Rental assets are provided under operating lease contracts with numerous customers, and the book value of the rental assets as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Rental assets	₩ 526,722,393	₩ 530,204,156

12. Intangible assets

Details of intangible assets as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016		
	Acquisition cost	Accumulated amortization, impairment and government grants	Net book value
Goodwill	₩ 129,000,695	₩ -	₩ 129,000,695
Industrial property rights	1,543,754	(1,490,124)	53,630
Software	69,244,970	(50,897,452)	18,347,518
Development expenditures	340,453	(340,453)	-
Usage rights	6,207,302	-	6,207,302
Others	62,013,868	(33,662,436)	28,351,432
Development-in-progress	1,033,285	-	1,033,285
	₩ 269,384,327	₩ (86,390,465)	₩ 182,993,862

12. Intangible assets (cont'd)

	2015		
	Acquisition cost	Accumulated amortization, impairment and government grants	Net book value
Goodwill	₩ 132,241,170	₩ (3,240,475)	₩ 129,000,695
Industrial property rights	1,543,754	(1,468,382)	75,372
Software	56,915,984	(44,951,486)	11,964,498
Development expenditures	340,453	(340,452)	1
Usage rights	6,186,862	-	6,186,862
Others	34,783,219	(14,175,251)	20,607,968
Development-in-progress	951,285	-	951,285
	₩ 232,962,727	₩ (64,176,046)	₩ 168,786,681

Changes in the book value of intangible assets for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016						
	Jan.1	Acquisition and capital expenditures	Amortization	Disposal, termination and impairment	Transfer	Exchange difference	Dec.31
Goodwill	₩ 129,000,695	₩ -	₩ -	₩ -	₩ -	₩ -	₩129,000,695
Industrial property rights	75,372	-	(21,742)	-	-	-	53,630
Software	11,964,498	9,542,077	(5,941,383)	-	2,784,479	(2,153)	18,347,518
Development expenditures	1	-	(1)	-	-	-	-
Usage rights	6,186,862	511,000	-	(490,560)	-	-	6,207,302
Others	20,607,968	40,969	(2,238,713)	-	9,942,124	(916)	28,351,432
Development-in-progress	951,285	2,866,479	-	-	(2,784,479)	-	1,033,285
	₩ 168,786,681	₩ 12,960,525	₩ (8,201,839)	₩ (490,560)	₩ 9,942,124	₩ (3,069)	₩182,993,862

	2015						
	Jan.1	Acquisition and capital expenditures	Amortization	Disposal, termination and impairment	Transfer	Exchange difference	Dec.31
Goodwill	₩ 129,000,695	₩ -	₩ -	₩ -	₩ -	₩ -	₩129,000,695
Industrial property rights	841,303	-	(134,967)	(630,964)	-	-	75,372
Software	11,543,386	2,204,948	(5,548,404)	10,590	3,754,750	(772)	11,964,498
Development expenditures	9,215	-	(9,214)	-	-	-	1
Usage rights	6,137,433	1,125,279	-	(1,075,850)	-	-	6,186,862
Others	22,455,287	22,812	(1,870,004)	-	-	(127)	20,607,968
Development-in-progress	639,000	4,067,035	-	-	(3,754,750)	-	951,285
	₩ 170,626,319	₩ 7,420,074	₩ (7,562,589)	₩ (1,696,224)	₩ -	₩ (899)	₩168,786,681

Impairment test of goodwill

Goodwill allocated to the respective cash-generating unit (CGU) as at December 31, 2016 and 2015 is as follows (Korean won in thousands):

Business unit	2016	2015
Health appliances	₩ 99,262,568	₩ 99,262,568
Cosmetics	8,128,348	8,128,348
Coway EnTech Co., Ltd.	21,609,779	21,609,779
	₩ 129,000,695	₩ 129,000,695

Goodwill is reviewed annually for impairment. Impairment tests indicate that the carrying amount of CGUs does not exceed the recoverable amount. The recoverable amounts of CGUs have been determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on financial budgets approved by management covering a five-year period. Net income to sales ratio for the five-year period and the estimated growth rates used for cash flow calculations beyond the five-year period are listed below. The key assumptions used for value-in-use calculations as at December 31, 2016 are as follows:

Business unit	Sales growth rate (*1)	Permanent growth rate (*2)	Discount rate (*3)
Health appliances	4.56%	1.00%	10.1%
Cosmetics	11.2%	1.00%	12.8%
Coway EnTech Co., Ltd.	13.4%	1.00%	11.2%

12. Intangible assets (cont'd)

(*1) Represents the projected growth rate of average annual sales from 2017 to 2021. The Group estimated cash flows based on past experiences, actual operating performance and business forecast. Revenues included in cash flows reflect business characteristics of each individual reportable segment.
(*2) The Group used the fixed permanent growth rate to estimate the future cash flows of the periods following 2022.
(*3) The Group used weighted-average cost of capital as the discount rate to determine the recoverable amount of each reportable segment. Risk-free discount rates, market risk premium and Beta (β) were verified by external information supplied by Bloomberg and were used to calculate capital ratio of each reportable segment.

13. Investment properties

Details of investment properties as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016		
	Acquisition cost	Accumulated depreciation and impairment	Book value
Land	₩ 17,634,059	₩ -	₩ 17,634,059
Buildings	18,353,516	(2,393,675)	15,959,841
	₩ 35,987,575	₩ (2,393,675)	₩ 33,593,900

	2015		
	Acquisition cost	Accumulated depreciation and impairment	Book value
Land	₩ 14,755,498	₩ -	₩ 14,755,498
Buildings	9,446,174	(1,028,111)	8,418,061
	₩ 24,201,672	₩ (1,028,111)	₩ 23,173,559

Changes in investment properties for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016			
	Acquisition cost	Depreciation	Transfer	Net book value
Land	₩ 14,755,498	₩ -	₩ 2,878,561	₩ 17,634,059
Buildings	8,418,061	(309,276)	7,851,056	15,959,841
	₩ 23,173,559	₩ (309,276)	₩ 10,729,617	₩ 33,593,900

	2015			
	Acquisition cost	Disposal	Depreciation	Net book value
Land	₩ 15,856,335	₩ (1,100,837)	₩ -	₩ 14,755,498
Buildings	10,553,915	(1,788,279)	(347,573)	8,418,061
	₩ 26,410,250	₩ (2,889,116)	₩ (347,573)	₩ 23,173,559

The fair value of investment properties as at December 31, 2016 amounted to ₩32,012 million (2015: ₩24,469 million). Rental income from investment properties for the year ended December 31, 2016 amounted to ₩1,736 million (2015: ₩1,227 million).

14. Other financial liabilities and other liabilities

Other financial liabilities and other liabilities as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Other short-term financial liabilities:				
Other payables	₩	155,863,958	₩	159,493,093
Accrued expenses		25,296,818		24,463,309
Others		57,803		29,489
	₩	181,218,579	₩	183,985,891
Other long-term financial liabilities:				
Long-term other payables	₩	1,358,827	₩	888,672
Guarantee deposits withheld		78,968		63,346
Rental deposits withheld		1,206,137		1,206,253
Others		21,034		44,950
	₩	2,664,966	₩	2,203,221
Other current liabilities:				
Advance receipts	₩	71,298,209	₩	60,519,380
Withholdings		12,793,294		10,360,851
Advance revenue		761,659		899,143
Liabilities for government grants		444,746		854,922
Due to customer for construction contracts		2,462,997		4,449,020
Others		56,364		172,010
	₩	87,817,269	₩	77,255,326
Other non-current liabilities:				
Long-term advances received	₩	9,199,584	₩	7,281,786
Reserve for agent losses		12,851,747		9,145,771
Others		2,510,509		50,000
	₩	24,561,840	₩	16,477,557

15. Short-term borrowings

Short-term borrowings as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	Financial institution	Interest rate (%)		2016		2015
Purchase loans	KEB Hana Bank	-	₩	-	₩	23,620,818
〃	Shinhan Bank	-		-		13,908,508
〃	Woori Bank	-		-		12,511,393
Working capital loans	Korea Development Bank	2.16		50,000,000		30,000,000
〃	NH Bank	2.15		30,000,000		-
Commercial paper	Shinhan Bank	1.84		80,000,000		-
〃	Mirae Asset Securities Co., Ltd	1.69		50,000,000		-
〃	Samsung Securities Co., Ltd.	1.77		30,000,000		-
〃	Korea Investment & Securities Co., Ltd.	1.70		100,000,000		-
			₩	340,000,000	₩	80,040,719

16. Long-term borrowings

Long-term borrowings as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	Financial institution	Interest rate (%)	2016	2015
Project financing (fixed)	NH Bank	6.00	₩ 3,724,000	₩ 3,776,000
Project financing (variable)	〃	4.43	3,724,000	2,087,500
Project financing (fixed)	〃	9.00	3,776,000	2,087,500
Credit loan	〃	6.43	588,000	-
			11,812,000	7,951,000
	Less: current portion		-	-
			₩ 11,812,000	₩ 7,951,000

17. Defined benefit liabilities (assets)

Net of defined benefit liabilities as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Defined benefit obligation	₩ 149,375,465	₩ 132,859,371
Plan assets	(155,227,337)	(120,485,668)
	₩ (5,851,872)	₩ 12,373,703

Gain and loss related to the defined benefit plan as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Current service costs	₩ 23,228,387	₩ 21,353,002
Interest costs on benefit liabilities	543,013	815,270
Retirement bonus and others	328,966	1,232,255
	₩ 24,100,366	₩ 23,400,527

Changes in the present value of the defined benefit obligation for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Beginning balance	₩ 132,859,371	₩ 111,355,074
Pension costs charged to profit or loss:		
Current service costs	23,228,387	21,353,002
Interest costs	3,426,565	3,511,672
	26,654,952	24,864,674
Benefits paid	(10,165,148)	(7,556,064)
Re-measurement gain or loss:		
Actuarial changes arising from changes in demographic assumptions	872,278	8,843
Actuarial changes arising from changes in financial assumptions	(707,514)	3,571,457
Experience adjustments	(220,851)	616,961
	(56,087)	4,197,261
Others	82,377	(1,574)
Ending balance	₩ 149,375,465	₩ 132,859,371

17. Defined benefit liabilities (assets) (cont'd)

Changes in the fair value of plan assets for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Beginning balance	₩ 120,485,668	₩ 95,403,670
Interest income	2,883,552	2,696,401
Contributed	41,827,889	31,106,125
Benefits paid	(9,676,012)	(8,136,493)
Re-measurement loss	(365,021)	(584,035)
Others	71,261	-
Ending balance	₩ 155,227,337	₩ 120,485,668

Key assumptions used for defined benefit plan calculations are as follows:

	2016	2015	Remark
Discount rate	2.78%~2.89%	2.76%~2.91%	Interest rate of high-quality corporate bonds
Wage increase rate	Rate by age	Rate by age	Historical experience

Details of operating plan assets as at December 31, 2016 and 2015 are as follows:

	2016	2015
Cash and bank deposits	57.06%	36.84%
Securities	42.94%	63.16%
	100.00%	100.00%

A quantitative sensitivity analysis for significant assumptions as at December 31, 2016 is as follows:

Assumptions	Discount rate		Wage increase rate	
Sensitivity level	0.5% points increase	0.5% points decrease	0.5% points increase	0.5% points decrease
Impact on defined benefit obligation	Decrease by 4.19%	Increase by 4.44%	Increase by 4.39%	Decrease by 4.18%

18. Provisions

Changes in the significant provisions for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016		
	Jan.1	Increase (decrease)	Dec.31
Product warranty provisions	₩ 831,647	₩ 456,259	₩ 1,287,906
Sales return provisions	770,792	17,703,796	18,474,588
Construction warranty provisions	693,310	(166,397)	526,913
Other loss provisions (Note 20)	1,442,019	-	1,442,019
	₩ 3,737,768	₩ 17,993,658	₩ 21,731,426

	2015		
	Jan.1	Increase (decrease)	Dec.31
Product warranty provisions	₩ 972,986	₩ (141,339)	₩ 831,647
Sales return provisions	558,759	212,033	770,792
Construction warranty provisions	544,560	148,751	693,311
Other loss provisions (Note 20)	-	1,442,019	1,442,019
	₩ 2,076,305	₩ 1,661,464	₩ 3,737,769

19. Reserve for agent losses

In accordance with the contract between the Group and its sales agents, the Group provides a reserve by deducting a certain portion of commission fees payable to its sales agents to account for any unfavorable events that may result in losses to be absorbed by the Group.

20. Commitments and contingencies

(1) Some models of the ice-making water purifiers sold by the Group in the past were found to dispense alien compounds. As a result, the Group recognized consumer compensation expenses (selling and administrative expenses) of ₩49,572 million in relation to the disposal and compensation of rental assets, and recognized a deduction from sales in relation to rental charges to be refunded of ₩62,167 million and receivables of ₩5,750 million for the year ended December 31, 2016. In addition, the Group recognized ₩4,631 million and ₩2,914 million as cost of sales (sales commission and loss on inventory valuation) and loss on impairment of property, plant and equipment (non-operating expenses) in relation to deferred expenses for installation, inventories and tools held by the Group for the year ended December 31, 2016. As at December 31, 2016, 4 lawsuits (claim value: ₩5,848 million) related to the case are pending and the outcomes of the lawsuits cannot be predicted.

(2) In addition to (1), as at December 31, 2016, the Group is involved in 12 lawsuits as a defendant with total claims amounting to ₩17,248 million and 8 lawsuits as a plaintiff with total claims amounting to ₩588 million. In relation to infringement on water purifying systems with cooling and heating functions held by Chung Ho Nais Co., Ltd., the Group lost the first trial and the second trial is in progress. The Group recognized other loss provisions at the best estimate of potential loss from the corresponding lawsuits.

(3) Commitments

As at December 31, 2016, details of available credit lines with various financial institutions are as follows (Korean won in thousands and USD):

Financial institution	Credit line		Description
Shinhan Bank and one other bank	KRW	115,000,000	Purchase loan
Korea Development Bank and four other banks	KRW	165,000,000	General loan
Shinhan Bank and four other financial institutions	KRW	280,000,000	Commercial paper
KEB Hana Bank and three other financial institutions	KRW	6,805,000	Secured loan with trade receivables settled electronically
NH Bank	KRW	3,000,000	Overdraft loan
IBK Bank	KRW	3,000,000	Working capital loan
KSCFC (*1)	KRW	143,678	Operating credit loan
Korea Development Bank and one other bank	KRW	15,876,000	Project finance loan
Woori Bank	USD	1,530,000	Usance L/C

(*1) Represents Korea Specialty Contractor Financial Cooperative.

20. Commitments and contingencies (cont'd)

(4) Guarantees and collateral

Details of guarantees provided by third parties as at December 31, 2016 are as follows (Korean won in thousands):

Guarantee provider	Description	Guarantee amount	
Seoul Guarantee Insurance (SGI)	Performance guarantee	KRW	24,021,976
Machinery Financial Cooperative (MFC)	Guarantee against defaults	KRW	14,900,462
KSCFC	〃	KRW	185,510
Woori Bank	Payment guarantees	USD	269,002
IBK Bank	〃	EUR	52,564
		KRW	39,107,948
		USD	269,002
		EUR	52,564

As at December 31, 2016, performance guarantees provided by the Group are as follows (Korean won in thousands):

Provided to	Collateralized asset	Collateralized amount		Details
IBK Bank	Property, plant and equipment (land and buildings)	₩	4,260,000	Payment guarantees collateral
MFC	Available-for-sale financial assets		472,492	Guarantee against defaults collateral
KSCFC	〃		180,090	〃
		₩	4,912,582	

(*) The Group is pledging the shares of Pocheon Malkunmul Co., Ltd. to NH Bank and Korea Development Bank for the purpose of securing the debts of its subsidiary and must provide two blank bills.

(5) Restricted deposits as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	Financial institution	2016		2015		Details
Cash and cash equivalents	KDB	₩	1,030,537	₩	2,170,447	Borrowings pledge
Short-term financial instruments	Hana Financial Investment Co., Ltd.		42,001,384		-	Treasury stock acquisition trust
Long-term financial instruments	NH Bank		4,300,000		4,300,000	Guarantee (*1)
〃	IBK Bank		4,000,000		4,000,000	〃
Long-term guarantee deposits	Woori Bank and others		7,000		13,500	Maintenance of a checking account
		₩	51,338,921	₩	10,483,947	

(*1) Represents guarantees to provide financial support for the purpose of promoting cooperation between small and medium-sized enterprises.

21. Issued capital

Details of the Group's issued capital as at December 31, 2016 are as follows (Korean won):

Number of shares authorized : 200,000,000 shares
Par value per share : ₩500
Number of common shares outstanding : 76,380,513 shares

The Group had previously retired 4,944,283 treasury shares through an appropriation of retained earnings. As a result, the number of ordinary shares outstanding amounts to 76,380,513 shares with a face value of ₩38,190 million, which differs from the face value and number of shares issued (issued capital: ₩40,662 million) recorded in the statement of financial position as at December 31, 2016.

Under Article 340.2 of the Commercial Law, the Group may grant stock options to its employees and directors to the extent permitted by the Group's Articles of Incorporation (Note 25) when the shareholders of the Group approve as a special resolution.

The Group is authorized to issue convertible bonds and bonds with warrants with the approval of the Board of Directors within the limit of ₩100 billion. As at December 31, 2016, no convertible bonds or bonds with warrants are issued.

22. Retained earnings and statements of appropriation of retained earnings

Retained earnings as at December 31, 2016 and 2015 consist of the following (Korean won in thousands):

	2016	2015
Legal reserve (*1)	₩ 20,331,199	₩ 20,347,427
Voluntary reserve	970,949,262	833,095,035
Unappropriated retained earnings	188,455,212	323,607,291
	₩1,179,735,673	₩1,177,049,753

(*1) The Group appropriates, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued capital stock. This reserve is not available for the payment of cash dividends, but may be transferred to capital or used to reduce accumulated deficit.

Dividends paid by the Group for the years ended December 31, 2016 and 2015 are as follows (Korean won):

	2016	2015
Dividends per share	₩ 2,800	₩ 2,000
Dividends paid	208,032,045,200	148,347,918,000

Dividends paid by the Group for the years ended December 31, 2016 and 2015 were equal to the amounts that were proposed for an approval at the annual shareholders' meeting.

23. Other components of equity

Other components of equity as at December 31, 2016 and 2015 consist of the following (Korean won in thousands):

	2016	2015
Gain on disposal of treasury shares	₩ 34,694,892	₩ 34,257,365
Treasury shares	(183,739,753)	(124,192,347)
Stock options	24,718,825	21,592,349
Gain on valuation of available-for-sale assets	61,144	40,276
Loss on translation of foreign operations	(5,833,038)	(5,247,599)
Others	(5,258,560)	(4,572,426)
	₩(135,356,490)	₩ (78,122,382)

24. Treasury shares

Changes in treasury shares for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016					
	Jan.1		Net increase (decrease) (*1)		Dec.31	
	Number of shares	Book value	Number of shares	Book value	Number of shares	Book value
Treasury shares	2,827,637	₩124,192,347	209,250	₩ 59,547,406	3,036,887	₩183,739,753

	2015					
	Jan.1		Net increase (decrease) (*1)		Dec.31	
	Number of shares	Book value	Number of shares	Book value	Number of shares	Book value
Treasury shares	2,950,837	₩129,603,414	(123,200)	₩ (5,411,067)	2,827,637	₩124,192,347

(*1) Consists of retirement of treasury stock and treasury stock issued at the exercise of stock options.

In order to stabilize the price of its shares, the Group acquires its own common shares and recognizes them as other components of equity. These common shares are planned to be used for retirement of treasury stock and issuance of shares at the exercise of stock options.

25. Share-based payments

Details of stock options granted by the Group as at December 31, 2016 are as follows (Korean won and shares):

- Shares issued through stock option: Registered ordinary shares
- Grant method: Settlement of cash or treasury shares is available for the issuance of additional shares or treasury shares and for the difference between the fair value or exercise price
- Vesting condition and exercisable period:

5th to 8th grant: Options are conditional on the employee completing three years' service after the grant date and the options are available to be exercised from the vesting date.

9th to 14th grant: Options are conditional on the employee completing two years' service after the grant date and additional 20% rights are granted for three years period from the vesting date. After the grant date, the Group may adjust the exercisable number of stock options on 20% of the granted shares each year for five years.

25. Share-based payments (cont'd)

15th grant: Options are conditional on the employee completing two years' service after the grant date and shall be entitled to exercise 100,000 shares in addition to one-third of the shares granted for one year from the time of vesting. The Group can adjust the exercisable amount for 100,000 shares of stock each year after the grant date (3 years).

	5th grant	6th grant	7th grant	8th grant	9th grant
Grant date	2009-03-20	2010-03-19	2011-03-25	2012-03-23	2013-02-26
Granted shares	330,000	132,120	69,000	228,000	1,191,000
Outstanding shares	-	-	14,000	85,000	542,020
Exercise price	₩ 27,484	₩ 35,260	₩ 34,780	₩ 37,420	₩ 50,000

	11th grant	12th grant	13th grant	14th grant	15th grant
Grant date	2013-11-12	2014-03-21	2015-03-31	2016-03-29	2016-10-31
Granted shares	261,800	467,500	571,500	155,000	300,000
Outstanding shares	234,460	217,515	520,510	155,000	300,000
Exercise price	₩ 60,160	₩ 71,470	₩ 88,670	₩ 95,810	₩ 92,640

Changes in outstanding share options for the years ended December 31, 2016 and 2015 are as follows (shares in unit):

	2016				
	5th grant	6th grant	7th grant	8th grant	9th grant
As at January 1	90,000	10,000	14,000	85,000	639,480
Granted	-	-	-	-	-
Forfeited	-	-	-	-	81,800
Exercised	90,000	10,000	-	-	15,660
As at December 31	-	-	14,000	85,000	542,020

	2016					
	11th grant	12th grant	13th grant	14th grant	15th grant	Total
As at January 1	239,116	416,865	571,500	-	-	2,065,961
Granted	-	-	-	155,000	300,000	455,000
Forfeited	4,656	183,830	50,990	-	-	321,276
Exercised	-	15,520	-	-	-	131,180
As at December 31	234,460	217,515	520,510	155,000	300,000	2,068,505

	2015			
	5th grant	6th grant	7th grant	8th grant
As at January 1	95,000	15,000	23,000	135,000
Granted	-	-	-	-
Forfeited	-	-	-	-
Exercised	5,000	5,000	7,000	50,000
Expired	-	-	2,000	-
As at December 31	90,000	10,000	14,000	85,000

	2015				
	9th grant	11th grant	12th grant	13th grant	Total
As at January 1	839,940	261,800	467,500	-	1,837,240
Granted	-	-	-	571,500	571,500
Forfeited	144,260	22,684	50,635	-	217,579
Exercised	56,200	-	-	-	123,200
Expired	-	-	-	-	2,000
As at December 31	639,480	239,116	416,865	571,500	2,065,961

25. Share-based payments (cont'd)

The Group uses the fair-value method to calculate compensation expenses of stock options and recognizes them as compensation expenses and capital adjustments over the vesting period. Details of the stock options as at December 31, 2016 are as follows (Korean won in thousands):

		5th grant	6th grant	7th grant	8th grant	9th grant
Total compensation expenses						
	At grant date	₩ 3,614,757	₩ 1,566,121	₩ 727,214	₩ 2,473,572	₩ 15,382,956
	Forfeited	(164,307)	(914,163)	(73,775)	(1,008,957)	(7,454,082)
		3,450,449	651,958	653,438	1,464,615	7,928,874
Recognized expenses	Before the prior year	3,450,449	651,958	653,438	1,464,615	7,776,197
	For the current year	-	-	-	-	(101,615)
		3,450,449	651,958	653,438	1,464,615	7,674,582
Exercised	Before the prior year	2,464,607	533,420	484,809	542,450	725,879
	For the current year	985,843	118,538	-	-	202,265
		3,450,449	651,958	484,809	542,450	928,144
Expired	Before the prior year	-	-	21,079	-	-
	For the current year	-	-	-	-	-
		-	-	21,079	-	-
Outstanding as at December 31		-	-	147,551	922,165	6,746,438
Compensation expenses to be recognized		₩ -	₩ -	₩ -	₩ -	₩ 254,292

		11th grant	12th grant	13th grant	14th grant	15th grant	Total
Total compensation expenses							
	At grant date	₩ 4,631,242	₩ 9,461,733	₩ 13,299,377	₩ 2,741,640	₩ 5,080,500	₩ 58,979,110
	Forfeited	(483,645)	(4,745,337)	(1,186,588)	-	-	(16,030,855)
		4,147,597	4,716,395	12,112,788	2,741,640	5,080,500	42,948,255
Recognized expenses	Before the prior year	2,955,042	5,377,182	4,035,712	-	-	26,364,593
	For the current year	655,529	(1,110,019)	3,923,238	873,494	506,603	4,747,230
		3,610,571	4,267,162	7,958,950	873,494	506,603	31,111,823
Exercised	Before the prior year	-	-	-	-	-	4,751,165
	For the current year	-	314,109	-	-	-	1,620,754
		-	314,109	-	-	-	6,371,919
Expired	Before the prior year	-	-	-	-	-	21,079
	For the current year	-	-	-	-	-	-
		-	-	-	-	-	21,079
Outstanding as at December 31		3,610,571	3,953,053	7,958,950	873,494	506,603	24,718,825
Compensation expenses to be recognized		₩ 537,026	₩ 449,233	₩ 4,153,838	₩ 1,868,146	₩ 4,573,898	₩ 11,836,433

25. Share-based payments (cont'd)

Assumptions used in calculating compensation expenses using the fair-value method are as follows (Korean won in thousands):

	5th grant	6th grant	7th grant	8th grant	9th grant
Risk-free interest rate	4.15%	4.30%	4.06%	3.82%	2.80%
Expected vesting period	5 years	5 years	5 years	5 years	5 years
Expected volatility	45.30%	40.25%	38.12%	35.89%	32.16%
Expected dividend yield	174.00%	202.00%	210.00%	210.00%	210.00%
Expected rate of lapsing share option	-	-	-	-	-
Total compensation expenses	₩ 3,614,757	₩ 1,566,121	₩ 727,214	₩ 2,473,572	₩15,382,956

	11th grant	12th grant	13th grant	14th grant	15th grant
Risk-free interest rate	3.24%	3.16%	1.82%	1.59%	1.53%
Expected vesting period	5 years	5 years	5 years	5 years	5 years
Expected volatility	30.52%	29.72%	30.24%	27.91%	27.95%
Expected dividend yield	210.00%	332.00%	400.00%	560.00%	560.00%
Expected rate of lapsing share option	-	-	-	-	-
Total compensation expenses	₩ 4,631,242	₩ 9,461,733	₩ 13,299,377	₩ 2,741,640	₩ 5,080,500

26. Finance lease

Gross investments in the lease and the present value of minimum lease payments as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016		2015	
	Gross investments in the lease	PV of minimum lease payments	Gross investments in the lease	PV of minimum lease payments
Less than 1 year	₩ 34,537,926	₩ 33,850,957	₩ 9,652,644	₩ 9,467,707
1 to 5 years	111,919,041	98,361,734	30,424,528	26,656,151
More than 5 years	10,887,109	8,682,755	4,537,984	3,537,920
	₩157,344,076	₩140,895,446	₩ 44,615,156	₩ 39,661,778

Unearned interest income from finance lease as at December 31, 2016 and 2015 is as follows (Korean won in thousands):

	2016	2015
Gross investments in the lease	₩ 157,344,076	₩ 44,615,156
Net investments in the lease	140,895,446	39,661,778
Unearned interest income	₩ 16,448,630	₩ 4,953,378

27. Selling and general administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Wages and salaries	₩	254,888,131	₩	242,134,423
Pension		21,316,377		20,692,347
Employee welfare benefits		38,846,317		35,579,291
Travel		7,899,882		7,738,134
Communication		8,731,779		9,136,716
Rents		60,667,911		56,508,240
Depreciation		9,222,014		11,361,781
Amortization		7,665,363		7,304,326
Repairs and maintenance		4,083,711		3,913,684
Supplies		22,920,591		23,040,740
Printing		1,527,794		2,246,927
Advertising		39,405,921		46,355,623
Sales promotion		59,128,712		52,999,222
Transportation		4,342,053		3,466,440
Insurance premium		4,041,113		3,997,294
Commissions		165,599,175		168,430,178
Training		11,226,905		10,777,182
Regular R&D		6,783,001		8,059,361
Sales commission		371,425,138		327,280,275
Share-based compensation		4,518,343		7,570,141
Customer compensation		52,390,518		4,341,806
Impairment loss on accounts receivable		11,898,721		20,454,788
Loss on termination of rental assets		47,350,962		41,602,368
Others		9,473,756		8,068,716
	₩	1,225,354,188	₩	1,123,060,003

28. Other income and expenses

Details of other income and expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Other income:	₩	1,221,984	₩	1,226,570
Rental income		5,815,023		4,821,960
Gain on foreign currency transactions		16,675,516		9,582,798
Gain on foreign currency translation		5,015,473		5,034,314
Miscellaneous income		9,586		3,781,609
Others	₩	28,737,582	₩	24,447,251
Other expenses:				
Loss on impairment of property, plant and equipment	₩	9,662,818	₩	7,546,674
Loss on impairment of intangible assets		-		633,853
Loss on disposal of property, plant and equipment		332,439		116,202
Loss on disposal of intangible assets		10,560		375,850
Loss on disposal of investment properties		-		33,009
Loss on impairment of other receivables		2,906,817		1,365,204
Loss on foreign currency transactions		11,511,160		3,896,814
Loss on foreign currency translation		12,931,007		13,393,748
Miscellaneous expenses		942,127		1,829,144
Others		593,338		1,216,642
	₩	38,890,266	₩	30,407,140

29. Finance income and costs

Details of finance income and costs for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Financial income:				
Interest income	₩	1,210,335	₩	1,423,153
Dividend income		1,990		-
Gain on disposal of available-for-sale assets		-		23
	₩	1,212,325	₩	1,423,176
Financial costs:				
Interest expenses	₩	6,103,169	₩	4,339,055
Loss on disposal of available-for-sale assets		1		-
	₩	6,103,170	₩	4,339,055

30. Expenses by nature

Expenses by nature for the years ended December 31, 2016 and 2015 consist of the following (Korean won in thousands):

		2016		2015
Changes in inventories of products and semi-products	₩	244,485	₩	(3,340,801)
Changes in inventories of merchandise		811,170		(4,654,436)
Use of merchandise and raw materials		509,400,554		472,418,960
Wages and salaries		314,372,456		282,766,562
Pension		24,100,366		23,400,527
Employee welfare benefits		40,759,911		39,193,506
Supplies		24,410,537		25,134,501
Commissions		176,773,314		169,952,154
Depreciation		224,947,746		220,111,520
Rents		61,242,964		56,807,760
Advertising		39,405,921		46,355,623
Sales promotion		59,128,712		52,999,222
Sales commissions		371,425,138		327,280,275
Impairment loss on accounts receivable		11,898,721		20,454,788
Loss on termination of rental assets		47,350,962		41,602,368
Others		131,257,757		81,420,567
	₩	2,037,530,714	₩	1,851,903,096

31. Construction contracts

Changes in construction contracts for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	Jan.1, 2016		Increase		Contracts revenue for the year		Dec. 31, 2016
₩	70,998,282	₩	31,920,993	₩	55,460,098	₩	47,459,176

	Jan.1, 2015		Increase		Contracts revenue for the year		Dec. 31, 2015
₩	82,505,044	₩	66,024,469	₩	77,531,231	₩	70,998,282

31. Construction contracts (cont'd)

As at December 31, 2016 and 2015, accumulated profit on major construction contracts outstanding is as follows (Korean won in thousands):

2016			2015		
Accumulated construction revenue	Accumulated construction costs	Accumulated profit	Accumulated construction revenue	Accumulated construction costs	Accumulated profit
₩ 275,035,072	₩ 234,360,632	₩ 40,674,440	₩ 145,852,572	₩ 132,968,588	₩ 12,883,984

Amounts due from (to) customers for construction contracts as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

2016		2015	
Due from customers (*1)	Due to customers (*2)	Due from customers (*1)	Due to customers (*2)
₩ 9,602,704	₩ 2,462,997	₩ 12,251,705	₩ 4,449,019

(*1) Classified as other current assets in the consolidated statements of financial position.
(*2) Classified as other current liabilities in the consolidated statements of financial position.

The Group recognizes construction warranty provisions for the obligation to perform warranty repairs after construction has been completed based on historical experience and the terms of construction warranty. The warranty expenses are recognized as construction costs for the year of construction completion.

There are no construction contracts that account for more than 5% of the prior year's sales from the water treatment equipment construction contracts as at December 31, 2016. In addition, there were no changes in the projected profit or loss and no changes in the estimated total contract costs due to changes in accounting estimates or errors.

32. Income taxes

The components of income tax expense for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Current income taxes including changes from addition and reverse of income taxes paid	₩ 97,024,176	₩ 107,454,861
Changes in deferred taxes due to temporary differences	(16,505,349)	3,045,843
Income tax expenses recognized directly to equity (*1)	(76,135)	842,330
Income tax expense	₩ 80,442,692	₩ 111,343,034

(*1) Deferred income taxes charged directly to equity as at December 31, 2016 and 2015 consist of the following (Korean won in thousands):

	2016		
	Gross amount	Income tax effect	Net of tax
Gain on valuation of available-for-sale financial assets	₩ 26,753	₩ (5,886)	₩ 20,867
Re-measurement of defined benefit plan	(308,935)	69,436	(239,498)
Gain on disposal of treasury shares	577,212	(139,685)	437,527
	₩ 295,030	₩ (76,135)	₩ 218,896

32. Income taxes (cont'd)

	2015					
	Gross amount		Income tax effect		Net of tax	
Gain on valuation of available-for-sale financial assets	₩	12,665	₩	(2,786)	₩	9,879
Re-measurement of defined benefit plan		(4,781,295)		1,155,659		(3,625,636)
Gain on disposal of treasury shares		1,283,235		(310,543)		972,692
	₩	(3,485,395)	₩	842,330	₩	(2,643,065)

A reconciliation of income before income taxes at the Korea statutory tax rate to income tax expense at the effective income tax rate of the Group is as follows (Korean won in thousands):

	2016		2015	
Profit before income tax	₩	323,753,925	₩	454,463,419
Income tax based on statutory rate:		77,886,450		109,518,147
Tax credit		(482,405)		(48,292)
Permanent differences and others		2,482,900		5,837,464
Unrealized deferred tax related to temporary differences		245,805		(4,758,509)
Changes in realizability of temporary differences		529,251		(4,778)
Additional payment of income taxes of the prior year		(154,208)		488,023
Others		(65,101)		310,979
Income tax expense	₩	80,442,692	₩	111,343,034
Effective tax rate		24.85%		24.50%

Details of deferred tax assets (liabilities) as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016		2015	
Deferred tax assets:				
To be recovered after 12 months	₩	51,162,854	₩	40,616,856
To be recovered within 12 months		52,091,124		30,069,118
Deferred tax liabilities:				
To be settled after 12 months		39,010,044		35,923,189
To be settled within 12 months		70,687,303		57,025,369
Net of deferred tax liabilities	₩	(6,443,369)	₩	(22,262,584)

32. Income taxes (cont'd)

Details of changes in cumulative temporary differences and deferred income tax assets (liabilities) for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016		
	Temporary difference		
	Beginning balance	Increase (decrease)	Ending balance
Deductible temporary differences:			
Advance receipts	₩ 15,234,951	₩ 2,457,811	₩ 17,692,762
Inventory valuation allowance	6,073,862	35,003,912	41,077,774
Accrued expenses	23,133,552	3,084,540	26,218,092
Unearned income	8,371,370	6,548,654	14,920,024
Provision for sales return	756,625	17,694,695	18,451,320
Provision for product warranty	6,083,692	4,217,907	10,301,599
Allowance for doubtful accounts	82,281,215	(11,607,637)	70,673,578
Rental assets	22,901,589	40,898,666	63,800,255
Impairment loss on property, plant and equipment	2,865,913	2,038,473	4,904,386
Defined benefit liabilities	90,607,073	17,516,002	108,123,075
Investments in subsidiaries	23,106,535	-	23,106,535
Long-term securities	2,450,203	(62,111)	2,388,092
Salaries for overseas employees	2,327,355	145,683	2,473,038
Others	23,069,398	3,924,804	26,994,202
	309,263,333	121,861,399	431,124,732
Taxable temporary differences:			
Prepaid expenses	252,568,723	32,685,874	285,254,597
Investments in subsidiaries	-	18,341	18,341
Provision for advanced depreciation (merger)	7,872,697	-	7,872,697
Provision for temporary depreciation (merger)	611,411	(33,435)	577,976
Plan assets	117,864,145	16,800,001	134,664,146
Goodwill (Woongjin Cuchen)	84,754,782	-	84,754,782
Goodwill (Woongjin Coway Construction)	1,564,734	(1)	1,564,733
Amortization of goodwill	21,071,402	-	21,071,402
Others	10,338,945	(5,547,946)	4,790,999
	496,646,839	43,922,834	540,569,673
Charged directly to equity:			
Gain on valuation of available-for-sale financial assets	(61,477)	34,724	(26,753)
Re-measurement of net of defined benefit liabilities	29,348,510	(1,526,964)	27,821,546
	29,287,033	(1,492,240)	27,794,793
Deferred tax expenses due to losses carried forward			
	₩ (158,096,473)	₩ 79,565,111	₩ (81,650,148)

32. Income taxes (cont'd)

	2016		
	Deferred income tax assets (liabilities)		
	Beginning balance	Increase (decrease)	Ending balance
Deductible temporary differences:			
Advance receipts	₩ 3,686,858	₩ 594,790	₩ 4,281,648
Inventory valuation allowance	1,562,667	8,206,928	9,769,595
Accrued expenses	5,583,663	743,458	6,327,121
Unearned income	2,010,635	1,571,538	3,582,173
Provision for sales return	183,103	4,282,117	4,465,220
Provision for product warranty	1,461,600	1,013,206	2,474,806
Allowance for doubtful accounts	20,073,944	(2,504,375)	17,569,569
Rental assets	4,055,953	9,535,252	13,591,205
Impairment on property, plant and equipment	693,551	493,310	1,186,861
Defined benefit liabilities	21,884,040	4,178,514	26,062,554
Investments in subsidiaries	-	-	-
Long-term securities	13,664	(13,664)	-
Salaries for overseas employees	-	-	-
Others	4,591,187	835,355	5,426,542
	65,800,865	28,936,429	94,737,294
Taxable temporary differences:			
Prepaid expenses	61,087,695	7,891,406	68,979,101
Investments in subsidiaries	-	-	-
Provision for advanced depreciation (merger)	1,905,193	-	1,905,193
Provision for temporary depreciation (merger)	147,961	(8,091)	139,870
Plan assets	28,492,088	4,022,466	32,514,554
Goodwill (Woongjin Cuchen)	-	-	-
Goodwill (Woongjin Coway Construction)	-	-	-
Amortization of goodwill	5,099,278	-	5,099,278
Others	1,186,141	(132,675)	1,053,466
	97,918,356	11,773,106	109,691,462
Charged directly to equity:			
Gain on valuation of available-for-sale financial assets	(13,525)	7,639	(5,886)
Re-measurement of net of defined benefit liabilities	7,068,165	(334,461)	6,733,704
	7,054,640	(326,822)	6,727,818
Deferred tax expenses due to losses carried forward	2,800,266	(1,017,285)	1,782,981
	₩ (22,262,585)	₩ 16,505,349	₩ (6,443,369)

32. Income taxes (cont'd)

	2015					
	Temporary difference					
	Beginning balance		Increase (decrease)		Ending balance	
Deductible temporary differences:						
Advance receipts	₩	18,742,898	₩	(3,507,947)	₩	15,234,951
Inventory valuation allowance		5,318,115		755,747		6,073,862
Accrued expenses		16,827,563		6,305,989		23,133,552
Unearned income		9,520,656		(1,149,286)		8,371,370
Provision for sales return		548,012		208,613		756,625
Provision for product warranty		7,090,963		(1,007,271)		6,083,692
Allowance for doubtful accounts		55,339,541		26,941,674		82,281,215
Rental assets		21,455,272		1,446,317		22,901,589
Impairment on property, plant and equipment		984,557		1,881,356		2,865,913
Defined benefit liabilities		73,770,172		16,836,901		90,607,073
Investments in subsidiaries		23,106,535		-		23,106,535
Long-term securities		2,388,092		62,111		2,450,203
Salaries for overseas employees		11,645,943		(9,318,588)		2,327,355
Others		35,762,242		(12,692,844)		23,069,398
		282,500,561		26,762,772		309,263,333
Taxable temporary differences:						
Prepaid expenses		212,711,350		39,857,373		252,568,723
Investments in subsidiaries		(10,445,628)		10,445,628		-
Provision for advanced depreciation (merger)		7,872,697		-		7,872,697
Provision for temporary depreciation (merger)		644,845		(33,434)		611,411
Plan assets		95,388,362		22,475,783		117,864,145
Goodwill (Woongjin Cuchen)		84,754,782		-		84,754,782
Goodwill (Woongjin Coway Construction)		1,564,734		-		1,564,734
Amortization of goodwill		19,703,713		1,367,689		21,071,402
Others		3,939,587		6,399,358		10,338,945
		416,134,442		80,512,397		496,646,839
Charged directly to equity:						
Gain on valuation of available-for-sale financial assets		(83,710)		22,233		(61,477)
Re-measurement of net of defined benefit liabilities		23,640,138		5,708,372		29,348,510
		23,556,428		5,730,605		29,287,033
Deferred tax expenses due to losses carried forward						
	₩	(110,077,453)	₩	(48,019,020)	₩	(158,096,473)

32. Income taxes (cont'd)

	2015					
	Deferred income tax assets (liabilities)					
	Beginning balance		Increase (decrease)		Ending balance	
Deductible temporary differences:						
Advance receipts	₩	4,535,781	₩	(848,923)	₩	3,686,858
Inventory valuation allowance		1,373,255		189,412		1,562,667
Accrued expenses		4,066,983		1,516,680		5,583,663
Unearned income		2,360,457		(349,822)		2,010,635
Provision for sales return		132,619		50,484		183,103
Provision for product warranty		1,909,773		(448,173)		1,461,600
Allowance for doubtful accounts		13,392,169		6,681,775		20,073,944
Rental assets		4,472,258		(416,305)		4,055,953
Impairment on property, plant and equipment		238,263		455,288		693,551
Defined benefit liabilities		17,819,056		4,064,984		21,884,040
Investments in subsidiaries		-		-		-
Long-term securities		-		13,664		13,664
Salaries for overseas employees		-		-		-
Others		5,451,432		(860,245)		4,591,187
		55,752,046		10,048,819		65,800,865
Taxable temporary differences:						
Prepaid expenses		51,563,094		9,524,601		61,087,695
Investments in subsidiaries		-		-		-
Provision for advanced depreciation (merger)		1,905,193		-		1,905,193
Provision for temporary depreciation (merger)		156,053		(8,092)		147,961
Plan assets		23,073,557		5,418,531		28,492,088
Goodwill (Woongjin Cuchen)		-		-		-
Goodwill (Woongjin Coway Construction)		-		-		-
Amortization of goodwill		4,768,298		330,980		5,099,278
Others		979,910		206,231		1,186,141
		82,446,105		15,472,251		97,918,356
Charged directly to equity:						
Gain on valuation of available-for-sale financial assets		(10,739)		(2,786)		(13,525)
Re-measurement of net of defined benefit liabilities		5,912,506		1,155,659		7,068,165
		5,901,767		1,152,873		7,054,640
Deferred tax expenses due to losses carried forward		1,575,550		1,224,716		2,800,266
	₩	(19,216,742)	₩	(3,045,843)	₩	(22,262,585)

32. Income taxes (cont'd)

Details of the unrecognized deferred income tax assets (liabilities) as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Investments in subsidiaries	₩ 23,088,194	₩ 23,106,535
Long-term investment securities	2,388,092	2,388,092
Payment guarantee for foreign subsidiaries	24,648	24,648
Salaries for overseas employees	2,473,038	2,327,355
Losses carried forward of subsidiaries	10,804,887	9,039,331
Trademarks	3,674,987	2,786,606
Others	1,983,025	1,777,731
Total deductible temporary differences	₩ 44,436,871	₩ 41,450,298
Goodwill (Woongjin Cuchen)	₩ 84,754,782	₩ 84,754,782
Goodwill (Woongjin Coway Construction)	1,564,733	1,564,733
Total taxable temporary differences	₩ 86,319,515	₩ 86,319,515

33. Earnings per share

(1) Basic earnings per share

Basic earnings per share for the years ended December 31, 2016 and 2015 are as follows (Korean won and shares):

	2016	2015
Net income	₩ 243,647,116,218	₩ 343,148,057,698
Weighted-average number of ordinary shares (*1)	74,284,049	74,258,041
Basic earnings per share	₩ 3,280	₩ 4,621

(*1) The weighted-average number of ordinary shares for the year ended December 31, 2016 and 2015 is calculated from shares outstanding which are weighted averaged by distribution period. Treasury shares, held from acquisition date until disposal date, are excluded from ordinary shares.

(2) Diluted earnings per share

Diluted earnings per share are calculated by adjusting the weighted-average number of ordinary shares to assume conversion of all potentially dilutive ordinary shares. The Group has potentially dilutive ordinary shares, which are stock options.

The Group's diluted earnings per share amounts for the years ended December 31, 2016 and 2015 are computed as follows (Korean won and shares):

	2016	2015
Net income	₩ 243,647,116,218	₩ 343,148,057,698
Add: expenses related to potentially dilutive shares	-	216,005,126
Net income adjusted for the effect of dilution	243,647,116,218	343,364,062,824
Weighted-average number of ordinary shares	74,284,049	74,258,041
Number of potentially dilutive ordinary shares (*1)	438,751	427,362
Total number of ordinary shares	74,722,800	74,685,403
Diluted earnings per share	₩ 3,261	₩ 4,597

(*1) Represents the dilutive effect of stock options which have been granted to certain executives and senior employees.

There were no events after the reporting period which could change the number of potentially dilutive shares.

34. Statements of cash flows

Details of non-cash adjustments for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Pension costs	₩	24,100,366	₩	23,400,527
Shared-based payment expense		4,747,230		7,933,961
Depreciation (tangible assets and investment properties)		224,947,746		220,111,520
Amortization		8,201,839		7,562,589
Loss on impairment of trade receivables		11,898,721		20,454,788
Loss on impairment of other receivables		2,906,817		1,365,204
Loss on valuation of inventories		6,279,908		1,635,199
Loss on termination of rental assets		47,350,962		41,602,368
Loss on foreign currency translation		12,931,007		13,393,748
Loss on impairment of property, plant and equipment		9,662,818		7,546,674
Loss on impairment of intangible assets		-		633,853
Gain on foreign currency translation		(16,675,516)		(9,582,798)
Interest income (rental income)		(4,588,039)		(328,905)
Interest income (finance income)		(1,210,335)		(1,423,153)
Interest expenses		6,103,169		4,339,055
Income tax expense		80,442,692		111,343,034
Others		49,401,122		(1,558,437)
	₩	466,500,507	₩	448,429,227

Details of working capital adjustments for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Increase in trade receivables	₩	(61,557,039)	₩	(57,948,658)
Increase in finance lease receivables		(101,233,668)		(39,661,778)
Increase in other short-term financial assets		(2,209,494)		(2,025,526)
Increase in other current assets		(18,003,659)		(27,921,511)
Increase in inventories		(4,050,342)		(4,997,625)
Increase in other non-current assets		(10,065,360)		(50,008,871)
Increase (decrease) in trade payables		(3,664,232)		5,797,402
Increase (decrease) in other short-term financial liabilities		(8,267,843)		9,616,998
Increase in other short-term liabilities		11,347,123		3,560,044
Decrease in other long-term financial liabilities		(37,747)		(39,306)
Increase in other long-term liabilities		8,041,264		94,639
Payment of pension benefits		(10,271,874)		(8,788,319)
Net increase in plan assets		(32,371,308)		(22,969,631)
	₩	(232,344,179)	₩	(195,292,142)

Significant transactions not affecting cash flows for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Transfer of construction-in-progress to respective tangible assets	₩	17,200,464	₩	6,586,759
Transfer of development-in-progress to respective intangible assets		2,784,479		3,754,750

35. Related party transactions

Related parties of the Group as at December 31, 2016 are as follows:

Relationship	Company name
Entity with significant influence over the Group	Coway Holdings Co., Ltd.

The Group paid dividends of ₩66,722 million and ₩47,658 million to Coway Holdings Co., Ltd. for the years ended December 31, 2016 and 2015, respectively.

Key management includes directors (register and non-register), members of the Board of Directors, Chief Financial Officer and the Head of Internal Audit. The compensation paid or payable to the key management for employee services for the years ended December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016	2015
Short-term employee benefits	₩ 7,537,460	₩ 5,875,067
Pension costs	761,159	625,911
Share-based payments expenses	4,747,230	7,933,961
	₩ 13,045,849	₩ 14,434,939

36. Fair value measurement

Details of the book value and fair value of financial instruments as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016		2015	
	Book value	Fair value (*1)	Book value	Fair value (*1)
Financial assets:				
Cash and cash equivalents	₩ 66,306,979	₩ 66,306,979	₩ 116,307,900	₩ 116,307,900
Trade receivables	316,389,255	316,389,255	256,015,920	256,015,920
Finance lease receivables	138,333,745	138,333,745	37,100,077	37,100,077
Other financial assets	115,546,197	115,546,197	67,466,379	67,466,379
Available-for-sale financial assets	2,464,020	2,464,020	2,430,096	2,430,096
	₩ 639,040,196	₩ 639,040,196	₩ 479,320,372	₩ 479,320,372
Financial liabilities:				
Trade payables	₩ 58,724,469	₩ 58,724,469	₩ 59,799,441	₩ 59,799,441
Borrowings	351,812,000	351,812,000	87,991,719	87,991,719
Other financial assets	183,883,545	183,883,545	186,189,113	186,189,113
	₩ 594,420,014	₩ 594,420,014	₩ 333,980,273	₩ 333,980,273

(*1) The Group detemined that the book values of the financial assets and liabilities carried at amortized cost were similar to their fair values.

Fair value hierarchy
The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique. The level of hierarchy of fair value is as follows:

Level 1 : Quoted (unadjusted) market prices in active markets for identical assets or liabilities
Level 2 : Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
Level 3 : Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

36. Fair value measurement (cont'd)

The level of fair value measurements of financial instruments as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and cash equivalents	₩ 57,931	₩ 66,249,048	₩ -	₩ 66,306,979
Trade receivables	-	-	316,389,255	316,389,255
Finance lease receivables	-	-	138,333,745	138,333,745
Short-term financial assets	-	-	42,001,384	42,001,384
Short-term loans	-	-	80,466	80,466
Other receivables	-	-	20,624,416	20,624,416
Long-term financial assets	-	9,336,736	-	9,336,736
Long-term guarantee deposits	-	-	43,503,194	43,503,194
Available-for-sale assets	-	-	2,464,020	2,464,020
Financial liabilities:				
Trade payables	-	-	58,724,469	58,724,469
Other payables	-	-	155,863,958	155,863,958
Accrued expenses	-	-	25,296,818	25,296,818
Short-term borrowings	-	340,000,000	-	340,000,000
Long-term other payables	-	-	1,358,827	1,358,827
Long-term borrowings	-	11,812,000	-	11,812,000
Guarantee deposits withheld	-	-	78,968	78,968
Rental deposits withheld	-	-	1,263,940	1,263,940
Others	-	-	21,034	21,034

	2015			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and cash equivalents	₩ 50,905	₩ 116,256,995	₩ -	₩ 116,307,900
Trade receivables	-	-	256,015,920	256,015,920
Finance lease receivables	-	-	37,100,077	37,100,077
Short-term loans	-	-	232,321	232,321
Other receivables	-	-	15,165,839	15,165,839
Long-term financial assets	-	8,982,813	-	8,982,813
Long-term loans	-	-	500,000	500,000
Long-term guarantee deposits	-	-	42,584,858	42,584,858
Available-for-sale assets	-	-	2,430,096	2,430,096
Others	-	-	549	549
Financial liabilities:				
Trade payables	-	-	59,799,441	59,799,441
Other payables	-	-	159,493,093	159,493,093
Accrued expenses	-	-	24,463,309	24,463,309
Short-term borrowings	-	80,040,719	-	80,040,719
Long-term other payables	-	-	888,672	888,672
Long-term borrowings	-	7,951,000	-	7,951,000
Guarantee deposits withheld	-	-	63,346	63,346
Rental deposits withheld	-	-	1,235,741	1,235,741
Others	-	-	44,952	44,952

36. Fair value measurement (cont'd)

The fair values of financial instruments traded in an active market are calculated based on market prices on the closing date of the reporting period. If the posted prices are easily and regularly usable through a clearing house, seller, intermediary, industrial group, appraisal institution or supervisory institution, and if the prices represent actual transactions between independent parties, the market of which the prices are quated is regarded as an active market. The posted market price of a financial asset held by the Group is a bid price. The financial instrument is classified as level 1. The instruments in the level 1 consist of the listed equity securities of KOSPI or KOSDA that are mostly classified as trading securities or available-for-sale securities.

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and minimize the use of entity-specific estimates. If all significant inputs required to measure the fair value of an instrument are observable, the instrument is classified as level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is classified as level 3.

Specific valuation techniques used to measure the fair value of financial instruments include:

- Quoted or dealer price of similar instruments
- The fair value of an interest rate swap is calculated by the present value of the estimated future cash flows that follow an observable earnings rate curve
- The fair value of forward foreign exchange contracts determined by using forward exchange rates at the reporting date, with the resulting value discounted to present value
- Other financial techniques such as discounted cash flow analysis

Details of changes in level 3 of the fair value hierarchy as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	Available-for-sale financial assets			
	2016		2015	
As at January 1	₩	818,132	₩	805,466
Profit or loss recognized in other comprehensive income		26,753		12,666
Others		303,044		-
As at December 31	₩	1,147,929	₩	818,132

The following table presents available-for-sale financial assets that are valued at historical cost as at December 31, 2016 and 2015 (Korean won in thousands):

	2016		2015	
Mc-Science Co., Ltd.	₩	1,133,760	₩	1,133,760
NEX Telecom Co., Ltd.		98,516		98,516
Nabi Story Co,. Ltd.		27,889		27,889
Construction Financial Cooperative		-		295,873
Electric Contractors' Financial Cooperative		50,000		50,000
Others		5,926		5,926
	₩	1,316,091	₩	1,611,964

36. Fair value measurement (cont'd)

Valuation techniques used in the fair value measurement of financial instruments except for financial instruments traded in an active market are as follows:

	Fair value measurements
Cash and cash equivalents	The book value of cash is equal to its fair value. For cash equivalents including ordinary deposits, general deposits and time deposits whose remaining maturity is less than 3 months, their book value is used as a substitute for their fair value.
Trade receivables, other financial assets	For short-term receivables including trade receivables and non-trade receivables, their book value is used as a substitute for their fair value.
Trade payables, other financial liabilities	For short-term payables including trade payables and non-trade payables, their book value is used as a substitute for their fair value.
Borrowings	For borrowings whose remaining maturity is less than a year from the date of issue, their book value is used as a substitute for their fair value. For borrowings whose maturity is more than a year from the date of issue, the fair value of the borrowings is calculated by discounting the expected future cash flow using the discounting rate derived from a market interest rate and credit risk of a counterparty.

For the year ended December 31, 2016, there is no significant change in business and economic environments which influence the fair value of financial assets and liabilities of the Group.

37. Financial risk management objectives and policies

The Group's activities are exposed to a variety of financial risks: market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Group's financial performance. The Group uses derivative financial instruments to hedge certain risk exposures.

Risk management is carried out by a central treasury department under policies approved by the Board of Directors. The Group's treasury department identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units. The Board of Directors provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments and investment exceeding liquidity.

(1) Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risks comprise three types of risk: interest rate risk, foreign currency risk and other price risk, such as equity price risk.

1) Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term borrowings with floating interest rates. The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate loans and borrowings. The Group's borrowings with floating interest rates as at December 31, 2016 and 2015 are ₩588,000 thousand and ₩84,215,719 thousand, respectively. The Group's profit before tax is affected by floating rate of its borrowings, and details are as follows (Korean won in thousands):

37. Financial risk management objectives and policies (cont'd)

	1% points increase	
	2016	2015
Impact on profit before tax	₩ (5,880)	₩ (842,157)

2) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures. Foreign exchange risk arises from exporting goods and services or importing raw materials that are recognized as assets, liabilities and foreign debenture. Periodically, the Group is evaluating, managing and reporting for foreign exchange risk. To avoid such fluctuations of foreign exchange risk, the Group uses particular derivatives.

As at December 31, 2016, if the currency had weakened or strengthened by 5% points against foreign currencies with all other variables held constant, the Group's profit before tax for the year ended December 31, 2016 would have been ₩12,063 million (2015: ₩886 million) higher or lower.

The Group's financial instruments denominated in major foreign currencies as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

	2016				
	USD	JPY	EUR	CNY	Total
Cash and cash equivalents	₩ 1,819,371	₩ 328,241	₩ 2,345,959	₩ -	₩ 4,493,571
Trade receivables (*1)	238,279,936	165,095	1,624,332	123,876	240,193,239
Trade payables	2,518,725	907,018	-	-	3,425,743

	2015				
	USD	JPY	EUR	CNY	Total
Cash and cash equivalents	₩ 5,725,300	₩ 2	₩ 841,853	₩ -	₩ 6,567,155
Trade receivables (*1)	11,962,009	490,874	2,026,959	39,215	14,519,057
Trade payables	2,383,203	987,089	-	-	3,370,292

(*1) Before deducting the related impairment loss.

3) Other price risk

Other price risk is the risk that the fair value or cash flows of instrument will fluctuate because of changes in market price other than interest rate risk and foreign currency risk. However, management assessed that the price movement of equity securities had no material effect on other comprehensive income as at December 31, 2016.

(2) Credit risk

Credit risk is managed on the Group basis. Credit risk arises from cash and cash equivalents, derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to wholesale and retail customers, including outstanding receivables and committed transactions. For banks and financial institutions, only independently rated parties with a minimum rating of 'A' are accepted. If wholesale customers are independently rated, these ratings are used. If there is no independent rating, the credit quality of the customer is evaluated taking into account its financial position, past experience and other factors. Individual risk limits are set based on internal or external ratings in accordance with limits set by the Board of Directors. The utilization of credit limits is regularly monitored. Sales to retail customers are settled in cash or using major credit cards. A summary of maximum exposure to the credit risk as at December 31, 2016 and 2015 is as follows (Korean won in thousands):

37. Financial risk management objectives and policies (cont'd)

		2016		2015
Cash and cash equivalents (*1)	₩	66,249,048	₩	116,256,995
Trade receivables		316,389,255		256,015,920
Finance lease receivables		138,333,745		37,100,077
Other short-term financial assets		62,705,777		15,398,219
Other long-term financial assets		52,840,420		52,068,161
	₩	636,518,245	₩	476,839,372

(*1) Excluded cash on hand from cash and cash equivalents in the consolidated statements of financial position.

(3) Liquidity risk

The Group monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining sufficient headroom on its undrawn committed borrowing facilities at all times so that the Group does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. Such forecasting takes into consideration the Group's debt financing plans, covenant compliance, compliance with the internal statement of financial position ratio targets and, if applicable, external regulatory or legal requirements.

The Group's treasury department invests surplus funds in interest-bearing current accounts, time deposits, money market deposits and marketable securities, which provide appropriate maturities or sufficient liquidity, to secure its liquidity as determined by the abovementioned forecasts.

The Group's liquidity risk as at December 31, 2016 and 2015 is as follows (Korean won in thousands):

	2016							
	Less than 1 year		Between 1 and 2 years		More than 2 years		Total	
Trade payables	₩	58,724,469	₩	-	₩	-	₩	58,724,469
Other financial liabilities		181,218,579		2,664,966		-		183,883,545
Short-term borrowings		340,000,000		-		-		340,000,000
Long-term borrowings		-		-		11,812,000		11,812,000
	₩	579,943,048	₩	2,664,966	₩	11,812,000	₩	594,420,014

	2015							
	Less than 1 year		Between 1 and 2 years		More than 2 years		Total	
Trade payables	₩	59,799,441	₩	-	₩	-	₩	59,799,441
Other financial liabilities		183,985,891		2,158,269		44,952		186,189,112
Short-term borrowings		80,040,719		-		-		80,040,719
Long-term borrowings		-		-		7,951,000		7,951,000
	₩	323,826,051	₩	2,158,269	₩	7,995,952	₩	333,980,272

(4) Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

Consistent with others in the industry, the Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings less cash and cash equivalents. Total capital is calculated as equity as shown in the statement of financial position plus net debt.

37. Financial risk management objectives and policies (cont'd)

The Group's gearing ratios as at December 31, 2016 and 2015 are as follows (Korean won in thousands):

		2016		2015
Total borrowings	₩	351,812,000	₩	87,991,719
Less: cash and cash equivalents		(66,306,979)		(116,307,900)
Net debt		285,505,021		(28,316,181)
Total equity		1,183,343,759		1,238,227,831
Total equity and debt	₩	1,468,848,780	₩	1,209,911,650
		19.44%		(*1)

(*1) Not presented due to the negative balance of net debt.

38. Approval of consolidated financial statements

The consolidated financial statements of the Group for the year ended December 31, 2016 were approved by the Board of Directors' meeting on February 10, 2017.