LG Electronics

Consolidated Financial Statements December 31, 2016 and 2015

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Independent Auditor's Report

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of LG Electronics Inc.

We have audited the accompanying consolidated financial statements of LG Electronics Inc. and its subsidiaries (collectively referred to as "the Group"), which comprise the consolidated statements of financial position as at December 31, 2016 and 2015, and the consolidated statements of profit or loss, consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies and other explanatory information.

Management's responsibilities for the financial statements

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

Auditor's responsibilities

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's 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 auditor considers 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 accompanying 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 consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean IFRS.

Other Matter

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such financial statements may differ from those generally accepted and applied in other countries.

Seoul, Korea March 9, 2017

This report is effective as of March 9, 2017, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

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Consolidated Statements of Financial Position

December 31, 2016 and 2015

(in millions of Korean won)	Note	2016	2015
Assets			
Current assets			
Cash and cash equivalents	5,6,37	3,015,137	2,710,156
Deposits held by financial institutions	5,6,37	80,559	87,454
Trade receivables	5,7,37	7,059,889	7,093,352
Loans and other receivables	5,7,37	545,766	654,141
Other financial assets	5,8,37	30,650	20,674
Inventories	9	5,171,015	4,872,676
Current income tax assets		147,221	161,314
Other current assets	10	931,420	794,227
Assets held for sale	39	8,906	3,619
	_	16,990,563	16,397,613
Non-current assets			
Deposits held by financial institutions	5,6,37	58,195	69,970
Loans and other receivables	5,7,37	490,178	506,788
Other financial assets	5,8,37	66,147	84,810
Property, plant and equipment	11	11,222,428	10,460,298
Intangible assets	12	1,571,087	1,473,280
Deferred income tax assets	17	1,554,594	1,637,796
Investments in associates and joint ventures	13	5,104,558	4,841,861
Investment properties	14	97,031	121,271
Net defined benefit assets	18	730	-
Other non-current assets	10	699,758	720,209
	_	20,864,706	19,916,283
Total assets	_	37,855,269	36,313,896
Liabilities			
Current liabilities			
Trade payables	5,37	6,746,361	6,086,975
Borrowings	5,15,37	1,650,511	2,326,128
Other payables	5,16,37	3,196,735	2,840,217
Other financial liabilities	5,8,37	21,115	13,823
Current income tax liabilities		74,263	76,575
Provisions	19	770,967	575,944
Other current liabilities	20	3,284,412	2,853,101
New compart list littles	_	15,744,364	14,772,763
Non-current liabilities	E 4 E 0 Z	7 000 500	0 504 400
Borrowings	5,15,37	7,008,500	6,501,122
Other payables	5,16,37	7,771	13,518
Other financial liabilities	5,8,37	73,226	69,926
Deferred income tax liabilities	17	9,586	5,800
Net defined benefit liabilities	18	511,252	787,610
Provisions	19	1,028,298	1,074,346
Other non-current liabilities	20	115,530	105,324
	_	8,754,163	8,557,646
Total liabilities		24,498,527	23,330,409
Equity attributable to owners of the Parent Con	• •		
Paid-in capital:	21	004400	004400
Share capital		904,169	904,169
Share premium	~~	3,088,179	3,088,179
Retained earnings	22	9,233,416	9,016,546
Accumulated other comprehensive income	23	(1,028,962)	(1,171,979)
Other components of equity	24	(209,708)	(210,343)
· · · · ·	_	11,987,094	11,626,572
Non-controlling interests	_	1,369,648	1,356,915
Total equity	_	13,356,742	12,983,487
Total liabilities and equity	3 –	37,855,269	36,313,896
	-		

LG Electronics Consolidated Statements of Profit or Loss Years ended December 31, 2016 and 2015

(in millions of Korean won, except per share amounts)	Note	2016	2015
Continuing operations			
Net sales	25	55,367,033	56,509,008
Cost of sales	26	41,630,293	43,635,063
Gross profit		13,736,740	12,873,945
Selling and marketing expenses	26,27	6,689,714	6,607,913
Administrative expenses	26,27	1,347,677	1,409,512
Research and development expenses	26,27	2,468,628	2,377,830
Service costs	26,27	1,892,958	1,286,399
Operating profit		1,337,763	1,192,291
Financial income	28	490,593	542,586
Financial expenses	29	884,051	903,084
Gain from equity method valuation	13	268,738	359,510
Other non-operating income	30	1,894,584	1,881,632
Other non-operating expenses	31	2,385,910	2,479,810
Profit before income tax		721,717	593,125
Income tax expense	17	595,402	340,154
Profit for the year from continuing operations	_	126,315	252,971
Discontinued operations			
Loss for the year from discontinued operations	40		(3,828)
Profit for the year	_	126,315	249,143
Profit(loss) for the year attributable to:			
Equity holders of the Parent Company			
Continuing operations		76,879	128,228
Discontinued operations			(3,834)
Non controlling interacto		76,879	124,394
Non-controlling interests Continuing operations		49,436	124,743
Discontinued operations			6
		49,436	124,749
Earnings(loss) per share attributable			
to the equity holders of the Parent			
Company during the year (in won):	32		
Earnings(loss) per ordinary share		422	686
From continuing operations		422	707
From discontinued operations		-	(21)
Earnings(loss) per preferred share		472	736
From continuing operations		472	757
From discontinued operations		-	(21)

LG Electronics Consolidated Statements of Comprehensive Income Years ended December 31, 2016 and 2015

(in millions of Korean won)	Note	2016	2015	
Profit for the year		126,315	249,143	
Other comprehensive income, net of tax				
Items that will not be reclassified subsequently to profit or loss				
Remeasurements of the net defined benefit liability	18	182,022	(95,354)	
Share of remeasurements of associates	13	44,871	(31,388)	
Items that will be reclassified subsequently to profit or loss				
Share of other comprehensive income (excluding remeasurements)				
of associates and joint ventures	13	(40,011)	22,235	
Cash flow hedges	37	(2,946)	(19,848)	
Available-for-sale financial assets	8	(377)	2,426	
Exchange differences on translation of foreign operations		174,625	(26,378)	
Other comprehensive income for the year, net of tax		358,184	(148,307)	
Total comprehensive income for the year, net of tax		484,499	100,836	
Comprehensive income(loss) for the year, net of tax, attributable to:				
Equity holders of the Parent Company		432,772	(20,035)	
Non-controlling interests		51,727	120,871	
Total comprehensive income for the year, net of tax		484,499	100,836	

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Consolidated Statements of Changes in Equity

Years ended December 31, 2016 and 2015

		Att	ributable to e	quity holders of th	e Parent Compar	ıy		
(in millions of Korean won)	Note	Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Other Components of Equity	Total	Non-controlling Interests	Total Equity
Balance at January 1, 2015		3,992,348	9,081,044	(1,143,557)	(210,412)	11,719,423	1,271,674	12,991,097
Total comprehensive income:						, -, -	· _ · · · ·	,,
Profit for the year		-	124,394	-	-	124,394	124,749	249,143
Remeasurements of the net defined benefit liability	18	-	(84,619)	-	-	(84,619)	(10,735)	(95,354)
Share of remeasurements of associates	13	-	(31,388)	-	-	(31,388)	-	(31,388)
Share of other comprehensive income								
(excluding remeasurements) of								
associates and joint ventures	13	-	-	22,235	-	22,235	-	22,235
Cash flow hedges	37	-	-	(19,848)	-	(19,848)	-	(19,848)
Available-for-sale financial assets	8	-	-	2,427	-	2,427	(1)	2,426
Exchange differences							.,	
on translation of foreign operations		-	-	(33,236)	-	(33,236)	6,858	(26,378)
Total comprehensive income (loss)		-	8,387	(28,422)	-	(20,035)	120,871	100,836
Transactions with owners:								
Dividends	22		(72,885)	-		(72,885)	(36,284)	(109,169)
Changes in controlling interests in subsidiaries	22		(12,005)	_	69	(72,005)	(30,284)	(109,109) 723
Total transactions with owners			(72,885)		69	(72,816)	(35,630)	(108,446)
Balance at December 31, 2015		3,992,348	9,016,546	(1,171,979)	(210,343)	11,626,572	1,356,915	12,983,487
,		-,,	-,,	(.,,)	()		.,	,,
Balance at January 1, 2016		3,992,348	9,016,546	(1,171,979)	(210,343)	11,626,572	1,356,915	12,983,487
Total comprehensive income:							· ·	
Profit for the year		-	76,879	-	-	76,879	49,436	126,315
Remeasurements of the net defined benefit liability	18	-	168,005	-	-	168,005	14,017	182,022
Share of remeasurements of associates	13	-	44,871	-	-	44,871	-	44,871
Share of other comprehensive loss								
(excluding remeasurements) of								
associates and joint ventures	13	-	-	(40,011)	-	(40,011)	-	(40,011)
Cash flow hedges	37	-	-	(2,946)	-	(2,946)	-	(2,946)
Available-for-sale financial assets	8	-	-	(377)	-	(377)	-	(377)
Exchange differences								
on translation of foreign operations		-	-	186,351	-	186,351	(11,726)	174,625
Total comprehensive income		-	289,755	143,017	-	432,772	51,727	484,499
Transactions with owners:								
Dividends	22	-	(72,885)	-	-	(72,885)	(39,414)	(112,299)
Changes in controlling interests in subsidiaries		-	(,::::)	-	635	635	420	1,055
Total transactions with owners		-	(72,885)		635	(72,250)	(38,994)	(111,244)
Balance at December 31, 2016		3,992,348	9,233,416	(1,028,962)	(209,708)	11,987,094	1,369,648	13,356,742
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LG Electronics Consolidated Statements of Cash Flows Years ended December 31, 2016 and 2015

(in millions of Korean won)	Note	2016	2015
Cash flows from operating activities			
Cash generated from operations	33	3,979,344	3,347,226
Interest received		77,639	75,579
Interest paid		(433,709)	(466,160)
Dividend received		71,919	71,897
Income tax paid		(537,203)	(409,767)
Net cash inflow from operating activities	_	3,157,990	2,618,775
Cash flows from investing activities			
Decrease in deposits held by financial institutions		63,163	69,809
Decrease in loans and other receivables		139,949	162,167
Proceeds from redemption and disposal of other financial assets		42,892	78,818
Proceeds from disposal of property, plant and equipment		103,824	81,575
Proceeds from disposal of intangible assets		2,523	1,999
Proceeds from disposal of and recovery of investments in			
associates and joint ventures		25,000	54,050
Proceeds from disposal of investment properties		21,853	750
Proceeds from disposal of assets held for sale		4,328	-
Transfer of business	33	6,535	112,340
Decrease in others		133	480
Increase in deposits held by financial institutions		(45,815)	(64,625)
Increase in loans and other receivables		(123,181)	(141,290)
Acquisition of other financial assets		(77,623)	(39,637)
Acquisition of property, plant and equipment		(2,019,014)	(1,747,253)
Acquisition of intangible assets		(457,077)	(483,592)
Acquisition of investments in associates and joint ventures		(66,526)	-
Business combination	38	(11,684)	(18,803)
Net cash outflow from investing activities	_	(2,390,720)	(1,933,212)
Cash flows from financing activities			
Proceeds from borrowings		1,750,751	1,980,473
Issuance of ordinary shares of subsidiaries		6,422	723
Repayments of borrowings		(1,918,592)	(2,061,111)
Dividends paid		(117,414)	(109,003)
Net cash outflow from financing activities	_	(278,833)	(188,918)
Effects of exchange rate changes on cash and cash equivalents		(183,456)	(30,895)
Net increase in cash and cash equivalents		304,981	465,750
Cash and cash equivalents at the beginning of the year	6	2,710,156	2,244,406
Cash and cash equivalents at the end of the year	6 _	3,015,137	2,244,408
each and bach equivalente at the end of the year	· -	5,015,157	2,110,100

1. General Information

LG Electronics Inc. (the "Company" or "Parent Company") was spun off from LG Electronics Investment Ltd. on April 1, 2002. The Parent Company's shares were listed on the Korea Exchange on April 22, 2002, and some of its preferred shares, in the form of global depositary receipts ("GDRs"), are listed on the London Stock Exchange at the end of the reporting period. The Parent Company is domiciled in Korea at Yeoui-daero, Yeongdeungpo-gu, Seoul.

As of December 31, 2016, LG Corp. owns 33.7% of the Parent Company's total shares, excluding preferred shares, while financial institutions, foreign investors and others own the rest.

The Parent Company and its subsidiaries (the "Group") operate following major business segments: Home Appliance & Air Solution segment manufactures and sells refrigerators, washing machines, vacuum cleaners and residential and commercial air conditioners; Mobile Communications segment manufactures and sells mobile communications equipment; Home Entertainment segment manufactures and sells TVs, monitors, and digital media products; Vehicle Components segment designs and manufactures automobile parts; and LG Innotek Co., Ltd. manufactures and sells LED, optics solutions, substrate materials, and automotive components businesses. As of December 31, 2016, the Parent Company has 123 subsidiaries (Note 1), 11 associates and joint ventures (Note 13).

(a) Consolidated subsidiaries as of December 31, 2016 and 2015, are as follows:

			Decembe	December 31, 2016 December 31, 2015					
			Percentage	of ownership	Percentage	of ownership			
Territory	Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
The Republic of Korea	Korea	Hiplaza Co., Ltd.	100.0%	-	100.0%	-	December	Wholesales and Retails of Electronic products	More than half of voting rights
	Korea	Hi Entech Co., Ltd.	100.0%	-	100.0%	-	December	Water engineering	More than half of voting rights
	Korea	LG Hitachi Water Solution Co., Ltd.	51.0%	49.0%	51.0%	49.0%	December	Water treatment	More than half of voting rights
	Korea	ACE R&A Co., Ltd.	100.0%	-	100.0%	-	December	Production and Sales of Air conditioner	More than half of voting rights
	Korea	Hi M Solutek Co., Ltd.	100.0%	-	100.0%	-	December	Maintenance	More than half of voting rights
	Korea	Hi Teleservice Co., Ltd.	100.0%	-	100.0%	-	December	Marketing Services	More than half of voting rights
	Korea	LGE Alliance Fund	96.2%	3.8%	96.2%	3.8%	December	Investment	More than half of voting rights
	Korea	LG Innotek Co., Ltd. ¹	40.8%	59.2%	40.8%	59.2%	December	Production and Sales of Electrical/Electronic materials	De-facto control
	Korea	LG Innotek Alliance Fund ¹	40.4%	59.6%	40.4%	59.6%	December	Investment	De-facto control
	Korea	Innowith Co., Ltd. ¹	40.8%	59.2%	40.8%	59.2%	December	Services	De-facto control
	Korea	Hanuri Co., Ltd.	100.0%	-	100.0%	-	December	Business facility maintenance	More than half of voting rights
	Korea	LGE Alliance Fund	98.7%	1.3%	98.7%	1.3%	December	Investment	More than half of voting rights
China	China	Inspur LG Digital Mobile Communications Co., Ltd.(LGEYT)	70.0%	30.0%	70.0%	30.0%	December	Production of Electronic products	More than half of voting rights

		December 31, 2016		December 31, 2015				
		Percentage	of ownership	Percentage	of ownership			
Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
China	LG Electronics (China) Co., Ltd.(LGECH)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
China	LG Electronics (China) Research and Development Center Co., Ltd.(LGERD)	100.0%	-	100.0%	-	December	R&D	More than half of voting rights
China	LG Electronics (Hangzhou) Co., Ltd.(LGEHN)	70.0%	30.0%	70.0%	30.0%	December	Production of Electronic products	More than half of voting rights
China	LG Electronics (Kunshan) Co.,Ltd.(LGEKS)	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
China	LG Electronics (Shanghai) Research and Development Center Co., Ltd.(LGCRC)	100.0%	-	100.0%	-	December	R&D	More than half of voting rights
China	LG Electronics Air- Conditioning(Shandong) Co., Ltd.(LGEQA)	100.0%	-	100.0%	-	December	Production and Sales of Electronic products	More than half of voting rights
China	LG Electronics HK Ltd.(LGEHK)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
China	LG Electronics Huizhou Ltd.(LGEHZ)	80.0%	20.0%	80.0%	20.0%	December	Production of Electronic products	More than half of voting rights
China	LG Electronics Nanjing Battery Pack Co.,Ltd.(LGENB) ²	50.0%	50.0%	-	-	December	Production of Electronic products	More than half of voting rights
China	LG Electronics Nanjing New Technology co.,LTD(LGENT)	70.0%	30.0%	70.0%	30.0%	December	Production of Electronic products	More than half of voting rights
China	LG Electronics Nanjing Vehicle Components Co.,Ltd.(LGENV)	100.0%	-	-	-	December	Production of Electronic products	More than half of voting rights
China	LG Electronics Qinhuangdao Inc.(LGEQH)	100.0%	-	100.0%	-	December	Production of Casting	More than half of voting rights
China	LG Electronics Shenyang Inc.(LGESY)	78.9%	21.1%	78.9%	21.1%	December	Production of Electronic products	More than half of voting rights
China	LG Electronics Tianjin Appliances Co., Ltd.(LGETA)	80.0%	20.0%	80.0%	20.0%	December	Production of Electronic products	More than half of voting rights
	China China China China China China China China China China China China China China	ChinaLG Electronics (China) Co., Ltd.(LGECH)ChinaLG Electronics (China) Research and Development Center Co., Ltd.(LGERD)ChinaLG Electronics (Hangzhou) Co., Ltd.(LGEHN)ChinaLG Electronics (Hangzhou) Co., Ltd.(LGEHN)ChinaLG Electronics (Kunshan) Co.,Ltd.(LGEKS)ChinaLG Electronics (Kunshan) Co.,Ltd.(LGEKS)ChinaLG Electronics (Shanghai) Research and Development Center Co., Ltd.(LGCRC)ChinaLG Electronics Air- Conditioning(Shandong) Co., Ltd.(LGEQA)ChinaLG Electronics HK Ltd.(LGEHK)ChinaLG Electronics HK Ltd.(LGEHK)ChinaLG Electronics Nanjing Battery Pack Co.,Ltd.(LGENB)2ChinaLG Electronics Nanjing New Technology co.,LTD(LGENT)ChinaLG Electronics Nanjing Vehicle Components Co.,Ltd.(LGENV)ChinaLG Electronics Qinhuangdao Inc.(LGEQH)ChinaLG Electronics Shenyang Inc.(LGESY)ChinaLG Electronics Shenyang Inc.(LGESY)	LocationSubsidiaryControlling interestChinaLG Electronics (China) Co., Ltd.(LGECH)100.0%ChinaLG 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		December 31, 2016		December 31, 2015				
		Percentage		Percentage				
Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
China	NanJing LG-Panda Appliances Co., Ltd.(LGEPN)	70.0%	30.0%	70.0%	30.0%	December	Production of Electronic products	More than half of voting rights
China	Qingdao LG Inspur Digital Communication Co., Ltd.(LGEQD)	70.0%	30.0%	70.0%	30.0%	December	Production of Electronic products	More than half of voting rights
China	Taizhou LG Electronics Refrigeration Co., Ltd.(LGETR)	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
China	Tianjin Lijie cartridge heater Co., Ltd.(LGETL)	66.7%	33.3%	66.7%	33.3%	December	Production of Heater	More than half of voting rights
China	LG Innotek Yantai Co., Ltd.(LGITYT) ¹	40.8%	59.2%	40.8%	59.2%	December	Production and Sales of Electrical/Electronic materials	De-facto control
China	LG INNOTEK HUIZHOU CO.,LTD(LGITHZ) ¹	40.8%	59.2%	40.8%	59.2%	December	Production and Sales of Electrical/Electronic materials	De-facto control
China	LG Innotek Trading (Shanghai) Co., Ltd(LGITSH) ¹	40.8%	59.2%	40.8%	59.2%	December	Sales of Electrical/Electronic materials	De-facto control
China	HiEntech (Tianjin) Co., LTD.	80.0%	20.0%	80.0%	20.0%	December	Water engineering	More than half of voting rights
Australia	LG Electronics Australia Pty, Ltd.(LGEAP)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
India	LG Electronics India Pvt. Ltd.(LGEIL) ⁴	100.0%	-	100.0%	-	March	Production and Sales of Electronic products	More than half of voting rights
Japan	LG Electronics Japan Lab. Inc.(LGEJL)	100.0%	-	100.0%	-	December	R&D	More than half of voting rights
Japan	LG Electronics Japan, Inc.(LGEJP)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
Malaysia	LG Electronics Malaysia SDN. BHD(LGEML)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	China China China China China China China China China Australia India Japan Japan	ChinaNanJing LG-Panda Appliances Co., Ltd.(LGEPN)ChinaQingdao LG Inspur Digital Communication Co., Ltd.(LGEQD)ChinaTaizhou LG Electronics Refrigeration Co., Ltd.(LGETR)ChinaTianjin Lijie cartridge heater Co., Ltd.(LGETL)ChinaLG Innotek Yantai Co., Ltd.(LGITYT)1ChinaLG Innotek Yantai Co., Ltd.(LGITYT)1ChinaLG Innotek Yantai Co., Ltd.(LGITYT)1ChinaLG Innotek Yantai Co., Ltd.(LGITYT)1ChinaLG Innotek Trading (Shanghai) Co., Ltd(LGITHZ)1ChinaLG Innotek Trading (Shanghai) Co., Ltd(LGITSH)1ChinaLG Electronics Australia Pty, Ltd.(LGEAP)IndiaLG Electronics India Pvt. Ltd.(LGEL)4JapanLG Electronics Japan Lab. Inc.(LGEJL)JapanLG Electronics Japan, Inc.(LGEJP)MalaysiaLG Electronics Malaysia SDN.	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			December 31, 2016 December 31, 2015						
			Percentage	Percentage of ownership Percentage of ownership					
Territory	Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
	Philippines	LG Electronics Philippines Inc.(LGEPH)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Singapore	LG Electronics Singapore PTE LTD.(LGESL)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Taiwan	LG Electronics Taiwan Taipei Co., Ltd.(LGETT)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Thailand	LG Electronics Thailand Co., Ltd.(LGETH)	100.0%	-	100.0%	-	December	Production and Sales of Electronic products	More than half of voting rights
	India	LG Soft India Private Limited.(LGSI) ⁴	100.0%	-	100.0%	-	March	R&D	More than half of voting rights
	Indonesia	P.T. LG Electronics Indonesia(LGEIN)	100.0%	-	100.0%	-	December	Production and Sales of Electronic products	More than half of voting rights
	Philippines	LG Electronics Pasig Inc. ³	38.0%	62.0%	38.0%	62.0%	December	Real estates	De-facto control
	Indonesia	PT. LG INNOTEK INDONESIA(LGITIN) ¹	40.8%	59.2%	40.8%	59.2%	December	Production and Sales of Electronic materials	De-facto control
	Taiwan	LG INNOTEK (TAIWAN) CO., LTD.(LGITTW) ¹	40.8%	59.2%	40.8%	59.2%	December	Sales of Electrical/Electronic materials	De-facto control
	Vietnam	LG Innotek Vietnam Hai Phong Co.,Ltd.(LGITVH) ¹	40.8%	59.2%	-	-	December	Production and Sales of Electrical/Electronic materials	De-facto control
	Malaysia	V-ENS (M) Sdn. Bhd.	100.0%	-	100.0%	-	December	Automotive engineering	More than half of voting rights
	Vietnam	LG Electronics Vietnam Haiphong Co., Ltd.(LGEVH)	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
	Indonesia	PT.LG Electronics Service Indonesia(LGEID)	99.8%	0.2%	99.8%	0.2%	December	Services	More than half of voting rights
	Philippines	HI-M SOLUTEK PHILIPPINES INC.	100.0%	-	-	-	December	Services	More than half of voting rights

			December 31, 2016		Decembe	er 31, 2015			
			Percentage	of ownership	Percentage	of ownership			
Territory	Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
Europe	Netherlands	LG Electronics Benelux Sales B.V.(LGEBN)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Germany	LG Electronics Deutschland GmbH(LGEDG)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Spain	LG Electronics Espana S.A.(LGEES)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Netherlands	LG Electronics European Holdings B.V.(LGEEH)	100.0%	-	100.0%	-	December	European Holding	More than half of voting rights
	Netherlands	LG Electronics European Shared Service Center B.V.(LGESC)	100.0%	-	100.0%	-	December	Services	More than half of voting rights
	France	LG Electronics France S.A.S.(LGEFS)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Greece	LG Electronics Hellas S.A.(LGEHS)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Italy	LG Electronics Italia S.p.A(LGEIS)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Latvia	LG Electronics Latvia, LLC(LGELA)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Hungary	LG Electronics Magyar KFT(LGEMK)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Poland	LG Electronics Mlawa Sp. z o.o(LGEMA)	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
	Sweden	LG Electronics Nordic AB(LGESW)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Poland	LG Electronics Polska Sp. z o.o(LGEPL)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Portugal	LG Electronics Portugal S.A.(LGEPT)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Romania	LG Electronics Romania S.R.L.(LGERO)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights

			December 31, 2016 December 31, 2015		er 31, 2015				
			Percentage	of ownership	Percentage	of ownership			
Territory	Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
	UK	LG Electronics United Kingdom Ltd.(LGEUK)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Poland	LG Electronics Wroclaw Sp.z o.o(LGEWR)	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
	Finland	LG Electronics Finland Lab, Oy(LGEFL)	100.0%	-	100.0%	-	December	R&D	More than half of voting rights
N I	Poland	LG Innotek Poland Sp. z.o. o.(LGITPO) ¹	40.8%	59.2%	40.8%	59.2%	December	Production and Sales of Electrical/Electronic materials	De-facto control
North America	USA	LG Electronics Miami Inc.(LGEMI)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	USA	LG Electronics Alabama Inc.(LGEAI)	100.0%	-	100.0%	-	December	Services	More than half of voting rights
	Canada	LG Electronics Canada, Inc.(LGECI)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Mexico	LG Electronics Mexicalli, S.A. DE C.V.(LGEMX)	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
	Mexico	LG Electronics Mexico S.A. DE C.V.(LGEMS)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	USA	LG Electronics Mobile Research U.S.A., L.L.C.(LGEMR)	100.0%	-	100.0%	-	December	R&D	More than half of voting rights
	USA	LG Electronics Mobilecomm U.S.A., Inc.(LGEMU)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Mexico	LG Electronics Monterrey Mexico S.A.de C.V.(LGEMM)	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
	Mexico	LG Electronics Reynosa S.A. DE C.V.(LGERS)	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
	USA	LG Electronics U.S.A., Inc.(LGEUS)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights

		December 31, 2016		Decembe	December 31, 2015			
		Percentage		Percentage				
Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
Mexico	Servicios Integrales LG S.A DE C.V	100.0%	-	100.0%	-	December	Services	More than half of voting rights
Mexico	Servicios LG Monterrey Mexico S.A. de C.V.	100.0%	-	100.0%	-	December	Services	More than half of voting rights
USA	Zenith Electronics Corporation of Pennsylvania	100.0%	-	100.0%	-	December	Production of Electronic products	More than half of voting rights
USA	Zenith Electronics Corporation(Zenith)	100.0%	-	100.0%	-	December	R&D	More than half of voting rights
USA	LG Innotek USA, Inc.(LGITUS)1	40.8%	59.2%	40.8%	59.2%	December	Sales of Electrical/Electronic materials	De-facto control
Mexico	LG INNOTEK MEXICO SA DE CV(LGITMX) ¹	40.8%	59.2%	40.8%	59.2%	December	Production and Sales of Automotive materials	De-facto control
Brazil	LG Armagem Geral Ltda.	100.0%	-	100.0%	-	December	Services	More than half of voting rights
Argentina	LG Electronics Argentina S.A.(LGEAR)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
Colombia	LG Electronics Colombia Ltda.(LGECB)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
Brazil	LG Electronics do Brasil Ltda.(LGEBR)	100.0%	-	100.0%	-	December	Production and Sales of Electronic products	More than half of voting rights
Honduras	LG Electronics Honduras S.de R.L. ²	20.0%	80.0%	20.0%	80.0%	December	Sales of Electronic products	De-facto control
Chile	LG Electronics Inc Chile Ltda.(LGECL)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
Panama	LG Electronics Panama, S.A.(LGEPS)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
Peru	LG Electronics Peru S.A.(LGEPR)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
Venezuela	LG Electronics Venezuela S.A.(LGEVZ)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Mexico Mexico USA USA USA Mexico Brazil Argentina Colombia Brazil Honduras Chile Panama Peru	MexicoServicios Integrales LG S.A DE C.VMexicoServicios LG Monterrey Mexico S.A. de C.V.USAZenith Electronics Corporation of PennsylvaniaUSAZenith Electronics Corporation(Zenith)USALG Innotek USA, Inc.(LGITUS)1MexicoLG INNOTEK MEXICO SA DE CV(LGITMX)1BrazilLG Armagem Geral Ltda.ArgentinaLG Electronics Colombia Ltda.(LGECB)BrazilLG Electronics Colombia Ltda.(LGEBR)HondurasLG Electronics Honduras S.de R.L.2ChileLG Electronics Inc Chile Ltda.(LGECL)PanamaLG Electronics Panama, S.A.(LGEPR)VenezuelaLG Electronics Peru S.A.(LGEPR)	LocationSubsidiaryControlling interestMexicoServicios Integrales LG S.A DE C.V100.0%MexicoServicios LG Monterrey Mexico S.A. de C.V.100.0%USAZenith Electronics Corporation of Pennsylvania100.0%USAZenith Electronics Corporation(Zenith)100.0%USALG Innotek USA, Inc.(LGITUS)140.8%MexicoLG INNOTEK MEXICO SA DE CV(LGITMX)140.8%MexicoLG INNOTEK MEXICO SA DE 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			December 31, 2016 December 31, 2015						
			Percentage	of ownership	Percentage	of ownership			
Territory	Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
	Panama	LG Consulting corp.	100.0%	-	100.0%	-	December	Services	More than half of voting rights
	Guatemala	LG Electronics Guatemala S.A.	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
Middle East and Africa	Nigeria	EASYTEC GLOBAL SERVICES INNOVATION LIMITED	100.0%	-	100.0%	-	December	Services	More than half of voting rights
	Angola	LG Electronics Angola Limitada(LGEAO)	100.0%	-	100.0%	-	December	Sales and Services of Electronic products	More than half of voting rights
	Jordan	LG Electronics (Levant) Jordan(LGELF)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	UAE	LG Electronics Africa Logistics FZE(LGEAF)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Algeria	LG Electronics Algeria SARL(LGEAS)	70.0%	30.0%	70.0%	30.0%	December	Sales of Electronic products	More than half of voting rights
	UAE	LG Electronics Dubai FZE(LGEDF)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Egypt	LG Electronics Egypt S.A.E(LGEEG)	100.0%	-	100.0%	-	December	Production and Sales of Electronic products	More than half of voting rights
	UAE	LG Electronics Gulf FZE(LGEGF)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	UAE	LG Electronics Middle East Co., Ltd.(LGEME)	100.0%	-	100.0%	-	December	Services	More than half of voting rights
	Morocco	LG Electronics Morocco S.A.R.L(LGEMC)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Nigeria	LG Electronics Nigeria Limited(LGENI)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Tunisia	LG Electronics North Africa Service Company S.A.R.L	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	UAE	LG Electronics Overseas Trading FZE(LGEOT)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights

			Decembe	er 31, 2016	Decembe	er 31, 2015			
			Percentage	of ownership	Percentage	of ownership			
Territory	Location	Subsidiary	Controlling interest	Non- controlling interest	Controlling interest	Non- controlling interest	Closing month	Major business	Basis of control
	South Africa	LG Electronics S.A. (Pty) Ltd.(LGESA)	100.0%	-	100.0%	-	December	Production and Sales of Electronic products	More than half of voting rights
	Turkey	LG Electronics Ticaret A.S.(LGETK)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights
	Saudi Arabia	LG-Shaker Co., Ltd.(LGESR)	51.0%	49.0%	51.0%	49.0%	December	Production of Electronic products	De-facto control
	Kenya	LG Electronics Service Kenya Limited(LGESK)	100.0%	-	100.0%	-	December	Services	More than half of voting rights
	Saudi Arabia	LG Electronics Saudi Arabia Limited	100.0%	-	100.0%	-	December	Services	More than half of voting rights
	UAE	Hi.M Solutek HVAC Service and Maintenance LLC	100.0%	-	-	-	December	Services	More than half of voting rights
Other	Russia	LG Alina Electronics(LGERI)	95.0%	5.0%	95.0%	5.0%	December	Services	More than half of voting rights
	Kazakhstan	LG Electronics Almaty Kazakhstan(LGEAK)	100.0%	-	100.0%	-	December	Production and Sales of Electronic products	More than half of voting rights
	Russia	LG Electronics RUS, LLC(LGERA)	100.0%	-	100.0%	-	December	Production and Sales of Electronic products	More than half of voting rights
	Ukraine	LG Electronics Ukraine Inc.(LGEUR)	100.0%	-	100.0%	-	December	Sales of Electronic products	More than half of voting rights

¹ Although the Group owns less than half of the voting rights of LG Innotek Co., Ltd. which is an intermediate parent company of its subsidiaries, the Group is deemed to have control over LG Innotek Co., Ltd. due to the size and dispersion of holdings of the other shareholders and their voting patterns at previous shareholders' meetings (Note 3).

² Although the Group owns less than 50% of the effective percentage of ownership of the entity, the Group has concluded that the Group controls the entity. This is because the Group has a right to appoint or dismiss the majority of its Board of Directors by virtue of an agreement with the other investors.

³ Although the Group owns less than 50% of the effective percentage of ownership of the entity, the Group has concluded that the Group controls the entity. This is because the Group has the substantial power to direct the relevant activities and is exposed to variable returns.

⁴ In the preparation of the consolidated financial statements, the financial statements for the year ended December 31, 2016 were used for those subsidiaries with different fiscal year ends.

(b) Financial information of major subsidiaries as of December 31, 2016 and 2015, and for the years ended December 31, 2016 and 2015, is as follows (before elimination of intercompany transactions):

			2016		
(in millions of Korean won)	Assets	Liabilities	Equity	Sales	Profit (loss) for the year
LG Innotek Co., Ltd.	4,022,157	2,433,816	1,588,341	5,321,758	12,166
LG Electronics U.S.A., Inc.(LGEUS)	2,633,459	2,366,409	267,050	7,847,480	(118,205)
LG Electronics European Shared Service Center B.V.(LGESC)	1,444,398	1,415,672	28,726	264,935	1,803
LG Electronics Mobilecomm U.S.A., Inc.(LGEMU)	986,534	820,799	165,735	6,001,261	33,998
Zenith Electronics Corporation(Zenith)	1,212,373	20,036	1,192,337	127,388	23,032
LG Electronics do Brasil Ltda.(LGEBR)	1,034,097	717,671	316,426	1,881,633	140,225
LG Electronics (China) Co. Ltd.(LGECH)	641,967	720,244	(78,277)	767,890	(47,552)
LG Electronics India Pvt. Ltd.(LGEIL)	695,674	333,974	361,700	2,428,741	222,972
Inspur LG Digital Mobile Communications Co., Ltd.(LGEYT)	593,009	482,014	110,995	2,969,420	43,477
LG Electronics Mlawa Sp. z o.o(LGEMA)	940,710	579,077	361,633	1,736,727	26,079
LG Electronics Vietnam Haiphong Co., Ltd.(LGEVH)	937,172	790,124	147,048	1,952,214	67,093
LG Electronics RUS, LLC(LGERA)	812,850	306,224	506,626	1,447,545	119,408
LG Electronics Wroclaw Sp.z o.o(LGEWR)	290,534	117,414	173,120	1,042,246	7,495
LG Electronics Reynosa S.A. DE C.V.(LGERS)	773,673	319,772	453,901	2,381,007	156,734
LG Electronics Egypt S.A.E(LGEEG)	254,402	473,434	(219,032)	397,570	(249,021)
LG Electronics Tianjin Appliances Co., Ltd.(LGETA)	522,949	280,595	242,354	928,264	25,008
NanJing LG-Panda Appliances Co., Ltd.(LGEPN)	421,504	284,497	137,007	983,928	23,611
Hiplaza Co., Ltd.	472,980	313,725	159,255	1,719,510	7,462
P.T. LG Electronics Indonesia(LGEIN)	494,883	178,505	316,378	1,187,929	44,730
LG Electronics Thailand Co., Ltd.(LGETH)	394,966	168,138	226,828	998,454	6,062
LG Electronics Mexico S.A. DE C.V.(LGEMS)	311,168	256,734	54,434	1,294,002	(4,247)
LG Electronics Nanjing New Technology Co., LTD(LGENT)	426,337	246,416	179,921	1,224,749	36,126
			2015		

					Profit (loss)
(in millions of Korean won)	Assets	Liabilities	Equity	Sales	for the year
LG Innotek Co., Ltd.	3,598,753	2,038,249	1,560,504	5,691,346	43,578
LG Electronics U.S.A., Inc.(LGEUS)	2,604,240	2,225,082	379,158	6,855,211	51,174
LG Electronics European Shared Service Center B.V.(LGESC)	1,463,216	1,435,769	27,447	236,746	1,551
LG Electronics Mobilecomm U.S.A., Inc.(LGEMU)	1,422,461	1,296,625	125,836	6,558,774	30,618
Zenith Electronics Corporation(Zenith)	1,158,934	25,421	1,133,513	171,313	39,685
LG Electronics do Brasil Ltda.(LGEBR)	845,113	710,508	134,605	2,276,927	(147,764)
LG Electronics (China) Co. Ltd.(LGECH)	819,831	851,696	(31,865)	1,289,413	(34,701)
LG Electronics India Pvt. Ltd.(LGEIL)	721,565	289,990	431,575	2,269,603	128,294
Inspur LG Digital Mobile Communications Co., Ltd.(LGEYT)	711,388	586,285	125,103	3,235,686	61,815
LG Electronics Mlawa Sp. z o.o(LGEMA)	660,449	309,582	350,867	1,515,361	71,097

LG Electronics Vietnam Haiphong Co., Ltd.(LGEVH)	622,130	543,409	78,721	858,116	4,161
LG Electronics RUS, LLC(LGERA)	582,293	287,013	295,280	1,500,852	28,278
LG Electronics Wroclaw Sp.z o.o(LGEWR)	538,236	364,485	173,751	1,470,504	16,030
LG Electronics Reynosa S.A. DE C.V.(LGERS)	537,263	248,987	288,276	2,137,546	(4,622)
LG Electronics Egypt S.A.E(LGEEG)	500,455	497,945	2,510	518,382	(11,212)
LG Electronics Tianjin Appliances Co., Ltd.(LGETA)	475,424	237,458	237,966	1,057,203	(6,030)
NanJing LG-Panda Appliances Co., Ltd.(LGEPN)	473,044	336,579	136,465	1,240,685	33,815
Hiplaza Co., Ltd.	471,017	324,739	146,278	1,452,959	4,771
P.T. LG Electronics Indonesia(LGEIN)	456,463	193,262	263,201	1,317,705	11,723
LG Electronics Thailand Co., Ltd.(LGETH)	411,732	198,365	213,367	1,026,936	29,389
LG Electronics Mexico S.A. DE C.V.(LGEMS)	370,466	300,400	70,066	1,536,983	568
LG Electronics Nanjing New Technology Co., LTD(LGENT)	373,211	215,085	158,126	1,164,039	28,944

- (c) Information of subsidiaries with material non-controlling interests is as follows:
 - LG Innotek Co., Ltd. and its subsidiaries
 - i) Percentage of ownership of non-controlling interests and accumulated non-controlling interests

(in millions of Korean won)	December 31, 2016	December 31, 2015
Percentage of ownership in non-controlling interests	59.2%	59.2%
Accumulated non-controlling interests	1,051,632	1,048,029

ii) Profit and dividends attributable to non-controlling interests for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
Profit to non-controlling interests	4,142	55,048
Dividends to non-controlling interests	4,904	3,503

iii) Summarized consolidated statements of financial position of subsidiaries with material non-controlling interests, are as follows (before elimination of intercompany transactions):

(in millions of Korean won)	December 31, 2016	December 31, 2015
Current assets	2,084,431	1,788,891
Non-current assets	2,239,288	2,125,447
Total assets	4,323,719	3,914,338
Current liabilities	1,733,745	1,295,457
Non-current liabilities	811,498	853,826
Total liabilities	2,545,243	2,149,283
Equity holders of Parent Company	1,778,474	1,765,053
Non-controlling interests	2	2
Total equity	1,778,476	1,765,055

 iv) Summarized consolidated statements of comprehensive income of subsidiaries with material non-controlling interests for the years ended December 31, 2016 and 2015, are as follows (before elimination of intercompany transactions):

(in millions of Korean won)	2016	2015
Net sales	5,754,566	6,138,129
Profit for the year	4,953	95,092
Other comprehensive income, net of tax	16,751	(20,611)
Total comprehensive income, net of tax	21,704	74,481

 v) Summarized consolidated statements of cash flows of subsidiaries with material noncontrolling interests for the years ended December 31, 2016 and 2015, are as follows (before elimination of intercompany transactions):

(in millions of Korean won)	2016	2015
Cash flows from operating activities	331,793	678,363
Cash flows from investing activities	(355,897)	(306,247)
Cash flows from financing activities	6,473	(408,463)
Effects of exchange rate changes on cash and cash equivalents	(1,377)	182
Net decrease in cash and cash equivalents	(19,008)	(36,165)
Cash and cash equivalents at the beginning of year	360,286	396,451
Cash and cash equivalents at the end of year	341,278	360,286

- (d) Significant restrictions on subsidiaries
 - i) Significant restrictions on ability to use the assets and settle the liabilities of the Group

Cash and other short-term financial instruments held by subsidiaries in Egypt, Algeria, Russia and Kazakhstan are subject to exchange control regulations of each relevant country. Accordingly, there are transfer limits on their cash and short-term financial instruments from these countries.

The nature and extent to which the protective rights of non-controlling interest can restrict the use of the assets and settlement of the liabilities of the Group are as follows:

Subsidiary	The nature and extent of the protective rights for non-controlling interest
LG Hitachi Water Solution Co., Ltd.	 For the following special resolutions of the Board of Directors, consents from directors who were appointed by non-controlling interest holder are required. Acquisitions and disposals of assets over \#1,000 million not included in the business plan Borrowings and issues of debentures over \#1,000 million not included in the business plan Expenditures over \#1,000 million not included in the business plan Initial agreement, amendment and termination of significant contracts over \#1,000 million
LG-Shaker Co., Ltd.(LGESR)	Unanimous approval is required for the confirmation of financial statements and dividend declaration.

(e) Changes in the Parent Company's interest in the subsidiaries

Changes in the Parent Company's interest in the subsidiaries without loss of control for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
HiEntech (Tianjin) Co., LTD.		
Decrease in the Parent Company's interest by issuance of ordinary shares (A)	-	(654)
Consideration received from non-controlling interest (B)	-	723
Changes in the Parent Company's ownership interest (A+B)	-	69
LG Electronics Nanjing Battery Pack Co.,Ltd. (LGENB)		
Decrease in the Parent Company's interest by issuance of ordinary shares (A)	(5,787)	-
Consideration received from non-controlling interest (B)	6,422	-
Changes in the Parent Company's ownership interest (A+B)	635	-

(f) Subsidiaries newly included in the scope of preparation of consolidated financial statements for the year ended December 31, 2016, are:

Subsidiary	Reason	Country	Percentage of ownership	Closing month	Major business
LG Electronics Nanjing Battery Pack Co.,Ltd.(LGENB)	Newly established	China	50.0%	December	Production of Electronic products
LG Electronics Nanjing Vehicle Components Co.,Ltd.(LGENV)	Newly established	China	100.0%	December	Production of Electronic products
Hi.M Solutek HVAC Service and Maintenance LLC	Newly established	UAE	100.0%	December	Services
HI-M SOLUTEK PHILIPPINES INC.	Newly established	Philippines	100.0%	December	Services
LG Innotek Vietnam Hai Phong Co.,Ltd.(LGITVH)	Newly established	Vietnam	40.8%	December	Production and sales of Electrical/ Electronic materials

(g) Subsidiaries excluded from the scope of preparation of consolidated financial statements for the year ended December 31, 2016, are:

Subsidiary	Reason	Country
Innovation Investment Fund	Liquidation	Korea
Shanghai LG Electronics Co., Ltd.(LGESH)	Liquidation	China
LG Electronics Vietnam Co., Ltd.(LGEVN)	Liquidation	Vietnam
SOCIO VIP Ltda.	Liquidation	Brazil
LG Electronics Austria GmbH(LGEAG)	Merger	Austria
LG Electronics CZ, s.r.o.(LGECZ)	Merger	Czech
C&S America Solutions	Merger	Panama

(h) Gain or loss resulted from loss of control

During the period, losses amounting to #629 million and #1,244 million were recognized from liquidation of Shanghai LG Electronics Co., Ltd. and LG Electronics Vietnam Co., Ltd., respectively, and no gain or loss incurred from the loss of control over Innovation Investment Fund and four other subsidiaries.

2. Significant Accounting Policies

The principal accounting policies applied in the preparation of these consolidated financial statements are stated below. These policies have been consistently applied to all the years presented, unless otherwise stated.

Basis of Preparation

The Group maintains its accounting records in Korean won and prepares statutory financial statements in the Korean language (Hangul) in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS"). The accompanying consolidated financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

Certain information attached to the Korean language financial statements, but not required for a fair presentation of the Group's financial position, financial performance or cash flows, is not presented in the accompanying consolidated financial statements.

The consolidated financial statements of the Group have been prepared in accordance with Korean IFRS. These are the standards, subsequent amendments and related interpretations issued by the International Accounting Standards Board (IASB) that have been adopted by the Republic of Korea.

The preparation of the consolidated financial statements requires the use of certain critical accounting estimates. It also requires management to exercise judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial

statements are disclosed in Note 3.

Changes in Accounting Policies and Disclosures

- (a) New and amended standards and interpretations effective for the financial year beginning January 1, 2016.
 - i) The new and amended standards and interpretations adopted by the Group from the financial year 2016:

- Amendment to Korean IFRS 1016: '*Property, Plant and Equipment*', and Korean IFRS 1038: '*Intangible Assets*' (Date of amendment: September 2014)

Amendments to Korean IFRS 1016 and Korean IFRS 1038 clarify that the use of a revenuebased depreciation and amortization method is not permitted since the method are affected by factors, such as number of units sold and selling price, that are not directly related to the economic consumption of an asset. However, the revenue-based method is acceptable in limited circumstances in which intangible assets are measured based on revenue. The application of this amendment does not have a significant impact on the accompanying consolidated financial statements.

- Amendment to Korean IFRS 1111: 'Joint Arrangements' (Date of amendment: September 2014)

Amendment to Korean IFRS 1111 requires the acquirer of an interest in a joint operation, in which the activity constitutes a business, as defined in Korean IFRS 1103, *'Business Combinations'*, to apply all of the principles on business combinations accounting in Korean IFRS 1103 and other Korean IFRSs, and to disclose the information related to the business combination. The application of this amendment does not have a significant impact on the accompanying consolidated financial statements.

- Amendment to Korean IFRS 1001: 'Presentation of Financial Statements' (Date of amendment: May 2015)

Amendment to Korean IFRS 1001, 'Presentation of Financial Statements', clarifies that the disclosed line items can be omitted, added, or aggregated in the list according to their materiality. In addition, the amendment clarifies that the share in the other comprehensive income of associates and joint ventures accounted for under the equity method should be presented separately in the financial statements based on whether they will or will not subsequently be reclassified to profit or loss. Also, additional requirements for disclosures in the notes and others are provided. The application of this amendment does not have a significant impact on the accompanying consolidated financial statements.

- Amendment to Korean IFRS 1110, 'Consolidated Financial Statements', Korean IFRS 1112, 'Disclosures of Interests in Other Entities', and Korean IFRS 1028, 'Investments in Associates and Joint ventures' (Date of amendment: May 2015)

Korean IFRS 1110, 'Consolidated Financial Statements', provides the exemption from preparing the consolidated financial statements in case an immediate parent company is also an investment entity, and clarifies that the investment entity is required to measure its

investment in a subsidiary at fair value where that subsidiary provides services in support of the investment entity's activities. Korean IFRS 1028, 'Investments in Associates and Joint Ventures', provides the exemption from applying the equity method on the financial statements in case an immediate parent company is also an investment entity. When applying the equity method to an associate and a joint venture, which are also investment entities, these investment entities measure all of their subsidiaries based on their financial statements at fair value. Korean IFRS 1112, 'Disclosures of Interests in Other Entities' clarifies that an investment entity which does not prepare consolidated financial statements should provide disclosures relating to the investment entity required by Korean IFRS 1112. The application of this amendment does not have an impact on the accompanying consolidated financial statements.

- Annual improvements of Korean IFRS (Date of amendment: February, May 2015)

Korean IFRS 1105, 'Non-current assets held for sale and Discontinued operations', Korean IFRS 1107, 'Financial Instruments: Disclosure', Korean IFRS 1019, 'Employee benefits', Korean IFRS 1034, 'Interim Financial Reporting'

The annual improvements of Korean IFRS do not have a significant impact on the accompanying consolidated financial statements.

- (b) New and amended standards and interpretations issued, but not effective for December 31, 2016, and not early adopted by the Group
 - Korean IFRS 1109, 'Financial Instruments' (Date of enactment: September 2015)

The new standard for financial instruments issued in September, 2015 is effective for annual periods beginning on or after January 1, 2018 with early application permitted. This standard will replace Korean IFRS 1039 *Financial Instruments: Recognition and Measurement.* The Group will apply the standards for annual periods beginning on or after January 1, 2018.

The standard requires retrospective application with some exceptions. For example, an entity is not required to restate prior period in relation to classification and measurement (including impairment) of financial instruments. The standard requires prospective application of its hedge accounting requirements for all hedging relationships except the accounting for time value of options and other exceptions.

Korean IFRS 1109 requires all financial assets to be classified and measured on the basis of the entity's business model for managing financial assets and the contractual cash flow characteristics of the financial assets. A new impairment model, an expected credit loss model, is introduced and any subsequent changes in expected credit losses will be recognized in profit or loss. Also, hedge accounting rules are amended to extend the hedging relationship, which consists only of eligible hedging instruments and hedged items, qualifies for hedge accounting.

An effective implementation of Korean IFRS 1109 requires preparation processes including

financial impact assessment, accounting policy establishment, accounting system development and the system stabilization. The impact on the Group's consolidated financial statements due to the application of the standard is dependent on judgements made in applying the standard, financial instruments held by the Group and macroeconomic variables.

The Group performed an impact assessment to identify potential financial effects of applying Korean IFRS 1109. The assessment was performed based on retainable information as of December 31, 2016. The Group plans to perform more detailed analysis on financial effects based on additional information in the future; therefore, the results of the assessment may change due to additional information that the Group may obtain after the assessment.

Classification and Measurement of Financial Assets

When implementing Korean IFRS 1109, the classification of financial assets will be driven by the Group's business model for managing the financial assets and contractual terms of cash flow. The following table shows the classification of financial assets measured subsequently at amortized cost, at fair value through other comprehensive income and at fair value through profit or loss. If a hybrid contract contains a host that is a financial asset, an embedded derivative is not separated from the host and the Group classifies the financial assets based on the entire hybrid contract.

Business model for the contractual cash flows characteristics	Solely represent payments of principal and interest	All other	
Hold the financial asset for the collection of the contractual cash flows	Measured at amortized cost ¹	••	
Hold the financial asset for the collection of the contractual cash flows and trading	Measured at fair value through other comprehensive income ¹	Measured at fair value through profit or loss ²	
Hold for trading	Measured at fair value through profit or loss		

¹ A designation at fair value through profit or loss is allowed only if such designation mitigates an accounting mismatch (irrevocable).

² An equity investment that is not held for trading can be recorded in other comprehensive income (irrevocable).

According to Korean IFRS 1109, a debt instrument is measured at amortized cost if: a) the objective of the business model is to hold the financial asset for the collection of the contractual cash flows, and b) the contractual cash flows under the instrument solely represent payments of principal and interest. As of December 31, 2016, the Group measured loans and receivables of \11,249,724 million and financial assets held-to-maturity of \117 million at amortized costs. Based on the results from the impact assessment of Korean IFRS 1109, the application of the new standard does not have a material impact on the Group's consolidated financial statements. This is because the Group holds the majority of financial assets that the Group holds give rise to cash flows that are solely payments of

principal and interest on the principal amount outstanding on a specified date, and b) the Group holds the financial assets in order to collect contractual cash flow.

According to Korean IFRS 1109, a debt instrument is measured at fair value through other comprehensive income if the objective of the business model is achieved both by collecting contractual cash flows and selling financial assets; and the contractual cash flows represents solely payments of principal and interest on a specific date under contract terms. As of December 31, 2016, the Group does not hold debt instruments classified as financial assets available-for-sale. Therefore, based on the results from the impact assessment of Korean IFRS 1109, the Group expects the application of the Korean IFRS 1109 will not have a material impact on the accompanying consolidated financial statements.

According to Korean IFRS 1109, the Group can make an irrevocable election at initial recognition to classify the equity instruments that are not held for trading instruments as assets measured at fair value through other comprehensive income. All subsequent changes in fair value of the instruments are recognized in other comprehensive income and not recycled to profit or loss. As of December 31, 2016, the Group holds equity instruments of \49,939 million classified as financial assets available-for-sale, however, there is no unrealized gain or loss recycled to profit or loss. Based on results from the impact assessment of Korean IFRS 1109, the Group plans to designate equity instruments, which are classified in financial assets available-for-sale for long-term investment purpose, as instruments measured at fair value through other comprehensive income. Therefore, the Group expects these financial assets will not have a material impact on the accompanying consolidated financial statements.

Classification and Measurement of Financial Liabilities

Korean IFRS 1109 requires the amount of the change in the liability's fair value attributable to changes in the credit risk to be recognized in other comprehensive income, unless this treatment of the credit risk component creates or enlarges a measurement mismatch. Amounts presented in other comprehensive income are not subsequently recycled to profit or loss. Based on the results from the impact assessment of Korean IFRS 1109, The Group does not hold financial liabilities designated at fair value through profit or loss as of December 31, 2016. Therefore, the Group expects the application of Korean IFRS 1109 will not have a material impact on the accompanying consolidated financial statements.

Impairment of Financial Assets and Contract Assets

Korean IFRS 1109 sets out a new forward looking 'expected credit loss' impairment model which replaces the incurred loss model under Korean IFRS 1039 that impaired assets if there is an objective evidence and applies to:

- · Debt investments measured at amortized cost
- Debt investments measured at fair value through other comprehensive income,
- · Lease receivables

- Contract assets
- · Loan commitments, and
- · Financial guarantee contracts.

Under Korean IFRS 1109 'expected credit loss' model, the Group can recognize expected credit loss earlier than the incurred loss model under Korean IFRS 1039 because the Group shall measure a loss allowance for a financial instrument at the amount equal to the 12-month or lifetime expected credit loss. Korean IFRS 1109 clarifies an exception that a loss allowance for lifetime expected credit losses is required for a financial instrument if contract assets or trade receivables are not considered to contain a significant financing component.

As of December 31, 2016, the Group owns financial instruments carries at amortized cost of 11,249,841 million (loan and receivables of 11,249,724 million, financial asset held-to-maturity of 117 million. And, the Group recognized loss allowance of 102,935 million for these financial assets.

The Group performed an impact assessment using the practical expedient with an assumption that for trade receivables and contract assets that do not contain a significant financing component, the Group measures the loss allowance at an amount equal to lifetime expected credit losses at initial recognition. As the results of the impact assessment, the Group expects the application of Korean IFRS 1109 will not have a material impact on the accompanying consolidated financial statements.

Hedge Accounting

Hedge accounting mechanics required by Korean IFRS 1039 remains unchanged in Korean IFRS 1109, however, it changes from the complex and rule-based requirement in Korean IFRS 1039 for hedge accounting to principles-based approach that focuses on the Group's risk management practices. Korean IFRS 1109 allows more hedging instruments and hedged items to qualify for hedge accounting, and relaxes the hedge accounting requirement by removing hedge effectiveness tests that are a quantitative (within range of 80-125 %) prospective test and retrospective test to ensure that the hedging relationship has been highly effective throughout the reporting period and is expected to be highly effective.

When the Group first applies Korean IFRS 1109, the Group plans to choose as its accounting policy choice to continue to apply all of the hedge accounting requirements of Korean IFRS 1039. The Group expects the application of Korean IFRS 1109 will not have a material impact on the accompanying consolidated financial statements.

- Korean IFRS 1115, '*Revenue from Contracts with Customers*' (Date of enactment: November 2015)

Korean IFRS 1115 *Revenue from Contracts with Customers* issued in November, 2015 is effective for annual reporting periods beginning on or after January 1, 2018, and earlier application is permitted. This standard replaces Korean IFRS 1018 *Revenue*, Korean IFRS

1011 Construction Contracts, Interpretation 2031 Revenue-Barter Transactions Involving Advertising Services, Interpretation 2113 Customer Loyalty Programs, Interpretation 2115 Agreements for the Construction of Real Estate and Interpretation 2118 Transfers of assets from customers. The Group must apply Korean IFRS 1115 Revenue from Contracts with Customers within annual reporting periods beginning on or after January 1, 2018, and will apply cumulative effect of the standard implementation by recognizing adjustments on the beginning balance of retained earnings (or other appropriate equity components) in the annual reporting period of implementation. In accordance with the standard, the Group will apply the standard retrospectively to prior reporting period for uncompleted contracts upon implementation date and apply the practical expedient with no restatement for completed contracts and other.

According to the current Korean IFRS 1018, revenue is recognized in the form of the sales of goods, the rendering of services, interest, royalties, dividends, construction contracts and others. However, according to Korean IFRS 1115, five-step model must be applied for revenue recognition:

- · Identify the contracts with customers
- · Identify the performance obligations in the contract
- · Determine the transaction price
- · Allocate the transaction price to the performance obligations, and
- · Recognize revenue when the entity satisfies a performance obligation

As of December 31, 2016, for the preparation of implementing Korean IFRS 1115, the Group formed a task force team consisting of members from accounting FD and information strategy FD and other practical departments if necessary. The Group performed an impact assessment to identify potential financial effects of applying Korean IFRS 1115. The assessment was performed based on retainable information as of December 31, 2016. The results of the assessment as of December 31, 2016 may change due to additional information that the Group may obtain after the assessment.

Identification of performance obligation

The Group sells home appliances, mobile communications equipment, TVs, monitors, automobile parts and others.

The Group expects that identifying performance obligation will not have a material impact on the accompanying consolidated financial statements because the Group recognizes revenue from service, of which contracts are generally separated, apart from sales of goods or products as of December 31, 2016.

Variable consideration

The Group may provide promotional incentive to enhance customer's revenue or allow sales

returns, which may cause variable consideration.

With implementation of Korean IFRS 1115, the Group estimates an amount of variable consideration by using the expected value which the Group expects to better predict the amount of consideration. The Group recognizes revenue with transaction price including variable consideration only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur. The refund liability is measured at the amount of consideration received for which the Group does not expect to be entitled.

According to current Korean IFRS, the Group estimates an amount of promotional incentive and reverses sales and trade receivables. Instead, with implementation of Korean IFRS 1115, the Group will reverse sales but recognize a refund liability. The Group recognizes an amount of gross profit for products the Group expects to be returned as a return liability according to current Korean IFRS. While, with the implementation of Korean IFRS 1115, the Group will recognize expected amount of return as the refund liability and cost of sales as assets. Based on the result from the impact assessment as of December 31, 2016, the Group expects the application of Korean IFRS 1115 will not have a material impact on revenue while both assets and liabilities are expected to be increased at the same time.

Costs to fulfil a contract

The Group's Vehicle Components segment is contracted with car makers for a supply of auto parts and supplies the auto parts to the customers through research and development. If the costs incurred in fulfilling a contract are directly related to the contracts, generate or enhance resources of the entity that will be used in satisfying performance obligations in the future, are expected to be recovered, and are not within the scope of other standards, it is recognized as an asset. Recognized assets are amortized on a systematic basis consistent with the way in which the related goods or services are provided.

Based on the result from the impact assessment as of December 31, 2016, the Group expects the application of Korean IFRS 1115 will result increases in assets and equity because the costs to fulfil a contract such as past research and development expenses will be recognized as assets.

Warranties

The Group has set standard warranty coverage periods per product and country considering warranty periods and others required by law when entering into contracts with customers for the sales of products. If the Group provides an extended warranty beyond the standard warranty coverage period or a customer has the option to purchase a warranty separately, the warranty is a distinct service according to Korean IFRS 1115.

Based on the results from the impact assessment as of December 31, 2016, the Company will have no material impact because extended warranties beyond standard terms have been recognized as separate revenue from service which is distinct from standard term of warranties.

- Amendments to Korean IFRS 1007, '*Statement of Cash Flows*' (Date of enactment: December 2016)

Amendments to Korean IFRS 1007 *Statement of Cash flows* requires 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 flows. The Group will apply this amendment for annual reporting periods beginning on or after January 1, 2017 with early application permitted. The Group does not expect the amendments to have a significant impact on the accompanying consolidated financial statements.

- Amendments to Korean IFRS 1012, 'Income Tax' (Date of amendment: December 2016)

When assessing whether there is sufficient future taxable profit to assess the probability of realizing a deferred tax asset, amendments clarify that the future taxable profit should exclude tax deductions resulting from the reversal of those deductible temporary differences. In addition, the Company is required to assess a deductible temporary difference separated by and in combination with other deductible temporary differences of the appropriate type depending on whether tax law restricts the source of taxable profit. The Group will apply the amendments for annual reporting periods beginning on or after January 1, 2017 with early application permitted. The Group does not expect the amendments to have a significant impact on the accompanying consolidated financial statements.

- Amendments to Korean IFRS 1102, '*Share-based Payment*' (Date of amendment: December 2016)

Amendments to Korean IFRS 1102 clarifies accounting for a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. And also, clarifies that the measurement approach should treat the terms and conditions of a cash-settled award in the same way as for an equity-settled award. The Group will apply the amendments for annual periods beginning on or after January 1, 2018 with early application permitted. The Group does not expect the amendments to have a significant impact on the accompanying consolidated financial statements.

Consolidation

The Group has prepared the consolidated financial statements in accordance with Korean IFRS 1110, '*Consolidated Financial Statements*'.

(a) Subsidiaries

Subsidiaries are all entities over which the Parent Company has control. The Parent Company controls the corresponding investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Consolidation of a subsidiary begins from the date the Parent Company obtains control of a subsidiary and ceases when the Parent Company loses control of the subsidiary.

The Group applies the acquisition method to account for business combinations. The consideration transferred is measured at the fair values of the assets transferred, and identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are initially measured at their fair values at the acquisition date. The Group recognizes any non-controlling interest in the acquiree on an acquisition-by-acquisition basis in the event of liquidation, either at fair value or at the non-controlling interest's proportionate share of the recognized amounts of acquiree's identifiable net assets. All other non-controlling interests are measured at their acquisition-date fair values, unless another measurement basis is required by IFRSs. Acquisition-related costs are expensed as incurred.

Goodwill is recognized as the excess of the aggregate of the consideration transferred, the amount of any non-controlling interest in the acquiree, and the acquisition-date fair value of the acquirer's previously held equity interest in the acquiree over the identifiable net assets acquired. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized in profit or loss.

Balances of receivables and payables, income and expenses and unrealized gains on transactions between the Group subsidiaries are eliminated. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

In transactions with non-controlling interests, which do not result in loss of control, the Group recognizes directly in equity any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received, and attribute it to the owners of the parent.

If the Group loses control of a subsidiary, any investment continuously retained in the subsidiary is re-measured at its fair value at the date when control is lost and any resulting differences are recognized in profit or loss.

(b) Associates

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting and are initially recognized at cost. The Group's investment in associates includes goodwill identified at acquisition, net of any accumulated impairment loss (Note 13).

The Group's share of its associates' post-acquisition profits or losses is recognized in the consolidated statements of profit or loss, and its share of post-acquisition movements in reserves is recognized in reserves. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. When the Group's share of losses in an associate equals or exceeds its interest in the associate, including any unsecured receivables, the Group does not recognize further losses, unless it has incurred obligations or made payments on behalf of the associate.

Unrealized gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group. Dilution gains and losses arising in investments in associates are recognized in the consolidated statements of profit or loss.

(c) Joint Arrangements

A joint arrangement of which two or more parties have joint control is classified as either a joint operation or a joint venture. A joint operator has rights to the assets, and obligations for the liabilities, relating to the joint operation and recognizes the assets, liabilities, revenues and expenses relating to its interest in a joint operation. A joint venture has rights to the net assets relating to the joint venture and accounts for that investment using the equity method.

(d) Transactions with non-controlling interests

The Group applies a policy of treating transactions with non-controlling interests as transactions with owners of the Group. The difference between any consideration paid and the relevant share of the carrying value of net assets of the subsidiary is recorded in equity. Gains and losses on disposal of non-controlling interests are also recognized in other components of equity.

(e) Business Combinations

The acquisition method of accounting is used to account for the acquisition of subsidiaries by the Group. The cost of an acquisition is measured as the fair value of the assets given, equity instruments issued and liabilities incurred or assumed at the date of exchange. The consideration transferred in a business combination includes fair values of the assets and liabilities from arrangements for contingent payments. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The Group measures non-controlling interests in the acquiree that entitle their holders to a proportionate share of the entity's net assets in the event of liquidation, on a case by case basis, at the proportionate share of the acquiree's identifiable net assets or fair value. All other components of non-controlling interests are measured at fair values, unless another measurement basis is required by IFRSs. Acquisition-related costs are recognized as expenses in the periods in which the costs are incurred.

In case of business combination achieved in stages, previously held equity interest in the acquiree is re-measured to fair value and a gain or loss is recognized in the consolidated statements of profit or loss.

The excess of the aggregate of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of the Group's previously held equity interest in the acquire over the net identifiable assets at the date of acquisition is recorded as goodwill. If the cost of the acquisition is less than the fair value of the net assets of the subsidiary acquired, the difference is recognized directly in the consolidated statements of profit or loss.

Segment Reporting

Operating segments are established on the basis of business divisions whose internal reporting is provided to the chief operating decision-maker who is the chief executive officer. Segmental disclosures are disclosed in Note 4 in accordance with Korean IFRS 1108, 'Operating Segment'.

Foreign Currency Translation

(a) Functional and presentation currency

Items included in the financial statements of each of the Group's companies are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The consolidated financial statements are presented in 'Korean won', which is the Parent Company's functional and presentation currency.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at each reporting date of monetary assets and liabilities denominated in foreign currencies are recognized in the consolidated statements of profit or loss, except qualifying cash flow hedges which are recognized in other comprehensive income.

Changes in the fair value of monetary securities denominated in foreign currency classified as available-for-sale are analysed between translation differences resulting from changes in the amortized cost of the security and other changes in the carrying amount of the security. Translation differences related to changes in amortized cost are recognized in profit or loss, and other changes in carrying amount are recognized in other comprehensive income.

Translation differences on non-monetary financial assets and liabilities, such as equities held at fair value through profit or loss, are recognized in the consolidated statements of profit or loss as part of the fair value gain or loss. Translation differences on non-monetary financial assets, such as equities classified as available-for-sale, are recognized in other comprehensive income.

(c) Translation into presentation currency

The results and financial position of all Group companies whose functional currency is different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities are translated at the closing rate at the end of the reporting period;
- Income and expenses are translated at monthly average exchange rates; and
- All resulting exchange differences are recognized in other comprehensive income.

When the Parent Company ceases to control a subsidiary, exchange differences that were recorded in equity are recognized in the consolidated statements of profit or loss as part of the gain or loss on sale.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate at the end of the reporting period.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits at banks, and other short-term highly liquid investments with original maturities of three months or less.

Financial Instruments

Classification

The Group classifies its financial instruments in the following categories: financial assets and liabilities at fair value through profit or loss, loans and receivables, available-for-sale financial assets, held-to-maturity investments, and other financial liabilities at amortized cost, derivatives for hedging purpose, and financial guarantee liabilities. The classification depends on the purpose for which the financial instruments were acquired and the nature of the instruments. The Group determines the classification of financial instruments at initial recognition.

(a) Financial assets and liabilities at fair value through profit or loss

Financial assets and liabilities at fair value through profit or loss are financial instruments held for trading. Financial assets and liabilities are classified in this category if acquired or incurred principally for the purpose of selling or repurchasing it in the near term. Derivatives that are not designated as hedges and financial instruments having embedded derivatives are also included in this category. Financial assets and liabilities at fair value through profit or loss of the Group are categorized in 'other financial assets' and 'other financial liabilities' on the consolidated statements of financial position, respectively.

(b) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for those with maturities greater than 12 months after the end of the reporting period. These are classified as non-current assets. The Group's loans and receivables comprise 'cash and cash equivalents', 'deposits held by financial institutions ,' 'trade receivables' and 'loans and other receivables'.

(c) Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in 'other financial assets' as noncurrent assets unless their maturities are less than 12 months or management intends to dispose of them within 12 months of the end of the reporting period.

(d) Held-to-maturity financial assets

Held-to-maturity financial assets are non-derivative financial assets with fixed or determinable payments and fixed maturities that the Group's management has the positive intention and ability to hold to maturity and are classified as 'other financial assets' in the consolidated statements of financial position. Held-to-maturity financial assets are included in non-current assets, except for those with maturities less than 12 months after the end of the reporting period, which are classified as current assets.

(e) Financial liabilities measured at amortized cost

Non-derivative financial liabilities are included in financial liabilities at amortized cost, except for financial liabilities at fair value through profit or loss. When a transfer of financial assets does not qualify for derecognition, associated financial liabilities are classified as the same category of the financial assets, and the transferred assets are continuously recognized and a financial liability is measured as the consideration received. Financial liabilities measured at amortized cost are included in non-current liabilities, except for maturities less than 12 months after the end of the reporting period, which are classified as current liabilities

(f) Other

Derivatives for hedging purpose and financial guarantee liabilities are grouped in 'other financial assets' or 'other financial liabilities', and are accounted in accordance with 'Derivative Financial Instruments' and 'Financial Guarantee Contracts' in Note 2.

Recognition and Measurement

Regular purchases and sales of financial assets are recognized on the trade date. Investments are initially recognized at fair value plus transaction costs for all financial assets not carried at fair value through profit or loss. Financial assets carried at fair value through profit or loss is initially recognized at fair value, and transaction costs are expensed in the consolidated statements of profit or loss. Financial assets are derecognized when the rights to receive cash flows from the investments have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership. Available-for-sale financial assets and financial assets at fair value through profit or loss are subsequently carried at fair value. Loans and receivables and held-to-maturity financial assets are subsequently carried at amortized cost using the effective interest rate method.

Gains or losses arising from changes in the fair value of the financial assets carried at fair value through profit or loss are presented in the consolidated statements of profit or loss within 'other non-operating income and expenses' in the period in which they arise. However, gains or losses on settlement of derivatives relative to borrowings are presented in 'financial income and expenses'. The Group recognizes a dividend from financial assets at fair value through profit or loss in the consolidated statements of profit or loss within 'non-operating income' when its right to receive the dividend is established.

Changes in fair value of monetary and non-monetary securities classified as available-for-sale

financial assets are recognized in other comprehensive income. When securities classified as available-for-sale are sold or impaired, the accumulated fair value adjustments recognized in equity are reported in the consolidated statements of profit or loss as 'other non-operating income and expenses'.

Interest on available-for-sale securities and held-to-maturity financial assets are calculated using the effective interest method and is recognized in the consolidated statements of profit or loss as part of 'financial income'. Dividends on available-for-sale equity instruments are recognized in the consolidated statements of profit or loss as part of 'other non-operating income' when the Group's right to receive payments is established.

Offsetting

Financial assets and liabilities are offset and the net amount reported in the consolidated statements of financial position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

Derecognition

Financial assets are derecognized when the contractual rights to receive cash from the investments have expired or have been transferred and the Group has substantially transferred all risks and rewards of ownership or when the risk and rewards of ownership of transferred assets have not been substantially retained or transferred and the Group has not retained control over these assets.

Trade receivable discounted and collaterals on factoring transactions such as trade receivable and others that do not qualify for the requirement above are not derecognized because the Group retains substantially all the risks and rewards due to recourse conditions in case of debtors' default on obligations and others. Financial liabilities associated with such transactions are categorized in 'borrowings' in the consolidated statements of financial position.

Impairment of Financial Assets

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or a group of financial assets that can be reliably estimated.

The criteria that the Group uses to determine that there is objective evidence of an impairment loss include:

- Significant financial difficulty of the issuer or obligor;
- A breach of contract, such as a default or delinquency in interest or principal payments;

- For economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- It becomes probable that the borrower will enter bankruptcy or other financial reorganization;
- The disappearance of an active market for that financial asset because of financial difficulties; or
- Observable data indicating that there is a measurable decrease in the estimated future cash flows from a portfolio of financial assets since the initial recognition of those assets, even though the decrease cannot be identified with the individual financial assets in the portfolio, including:
 - (i) adverse changes in the payment status of borrowers in the portfolio;
 - (ii) national or local economic conditions that correlate with defaults on the assets in the portfolio.
- (a) Loans and receivables and held-to-maturity financial assets (measured at amortized cost)

The amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognized in the consolidated statements of profit or loss. Impairment of assets measured at amortized cost is presented as a deduction in an allowance account. Impairment of other financial assets is directly deducted from their carrying amount. The Group writes off financial assets when the assets are determined to be no longer recoverable. In case of financial assets with variable interest rates, impairment losses are recognized with current effective interest rates in accordance with the contract.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized (such as an improvement in the debtor's credit rating), the reversal of the previously recognized impairment loss is recognized directly in the consolidated statements of profit or loss.

(b) Available-for-sale financial assets

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. For debt securities classified as available-for-sale, the Group uses the criteria referred to in (a) above. In the case of equity investments classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its cost is also evidence that the asset is impaired. If any such evidence exists for available-for-sale financial assets, the cumulative loss – measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognized in profit or loss – is removed from equity and recognized in the consolidated statements of profit or loss. Impairment losses recognized in the consolidated statements of profit or loss. If, in a subsequent period, the fair value of a debt instrument classified as available-for-sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognized in profit or loss, the impairment loss is reversed through the consolidated

statements of profit or loss.

Derivative Financial Instruments

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. The resulting gain or loss that does not meet the conditions for hedge accounting is recognized in 'other non-operating income and expenses' or 'financial income and expenses' according to the nature of transactions.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income. The gain or loss relating to the ineffective portion is recognized immediately in the consolidated statements of profit or loss within 'other non-operating income and expenses' or 'financial income and expenses'.

Amounts accumulated in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the consolidated statements of profit or loss within 'other non-operating income and expenses' or 'financial income and expenses'.

Trade Receivables

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. If collection is expected in one year or less, they are classified as current assets. If not, they are presented as non-current assets. Trade receivables are recognized initially at fair value, less allowance for doubtful debts.

Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the weighted-average method, except for inventories in-transit which is determined using the specific identification method. The cost of finished goods and work-in-process comprises raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity). The Group periodically reviews a possibility of the significant changes in net realizable value of inventories from not in use, decrease in market value and obsolescence, and recognizes as 'Allowances for Valuation of Inventories'. Net realizable value is the estimated selling price in the ordinary course of business, less applicable selling expenses.

Assets Held for Sale and Discontinued Operations

Non-current assets (or disposal groups) are classified as 'assets held for sale' when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount or fair value less costs to sell.

When a component of discontinued operations or a component of the Group representing a separate major line of business or geographical area of operation has been disposed of, or is subject to a sale plan involving loss of control of a subsidiary, the Group discloses in the

consolidated statements of profit or loss the post-tax profit or loss of discontinued operations and the post-tax gain or loss recognized on the measurement to fair value less costs to sell or on the disposal of the assets or disposal groups constituting the discontinued operation. The net cash flows attributable to the operating, investing and financing activities of discontinued operations are presented in the notes to the consolidated financial statements.

Property, Plant and Equipment

All property, plant and equipment are stated at historical cost less depreciation and impairment. Historical cost includes expenditures directly attribute to the acquisition of the items.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. All other repairs and maintenance are charged to the consolidated statements of profit or loss during the financial period in which they are incurred.

Land is not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate the difference between their acquisition cost and their residual values over their major estimated useful lives, as follows:

Buildings and Structures	20, 40 years
Machinery	5, 10 years
Tools	5 years
Equipment	5 years
Other	5 years

The assets' depreciation method, residual values, and useful lives are reviewed, and adjusted if appropriate, at each financial year-end. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount. Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognized within 'other non-operating income and expenses' in the consolidated statements of profit or loss.

Borrowing Costs

Borrowing costs incurred in the acquisition or construction of a qualifying asset are capitalized in the period when it is prepared for its intended use, and investment income earned on the temporary investment of borrowings made specifically for the purpose of obtaining a qualifying asset is deducted from the borrowing costs eligible for capitalization during the period. Other borrowing costs are recognized as expenses for the period in which they are incurred.

Government Grants

Grants from a government are recognized at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants relating to income are deferred and recognized in the consolidated statements of profit or loss over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to property, plant and equipment are presented as a deduction of related assets and are credited to depreciation over the expected lives of the related assets.

Intangible Assets

(a) Goodwill

Goodwill represents the excess of the aggregate of the consideration transferred, and the acquisition-date fair value of the Group's previously held equity interest in the acquiree over the net identifiable assets at the date of acquisition. Goodwill is tested at least annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed.

(b) Industrial property rights

Industrial property rights are shown at historical cost. Industrial property rights have a finite useful life and are carried at cost less accumulated amortization. Amortization is calculated using the straight-line method to allocate the cost of industrial property rights over their estimated useful lives of ten years.

(c) Development costs

Costs that are identifiable, controllable and directly attributable to development projects, in relation to new technology or new products, are recognized as development costs when all the following criteria are met and amortization of development costs based on the straight-line method over their estimated useful lives of one to three years begins at the commencement of the commercial production of the related products or use of the related technology.

- It is technically feasible to complete the intangible asset so that it will be available for use;
- Management intends to complete the intangible asset and use or sell it;
- There is the ability to use or sell the intangible asset;
- It can be demonstrated how the intangible asset will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development for using and selling the intangible asset are available; and
- The expenditure attributable to the intangible asset during its development can be reliably measured.

(d) Membership

Membership rights are regarded as intangible assets with an indefinite useful life and are not amortized because there is no foreseeable limit to the period over which the assets are expected

to be utilized. All membership rights are tested annually for impairment and stated at acquisition cost less accumulated impairment.

(e) Other intangible assets

Other intangible assets such as customer relationships, values of technics and software which meet the definition of an intangible asset are amortized using the straight-line method over their estimated useful lives of five to ten years.

Investment Property

Investment property is held to earn rentals or for capital appreciation or both. Investment property is measured initially at its cost including transaction costs incurred in acquiring the asset. After recognition as an asset, investment property is carried at its cost less any accumulated depreciation and impairment losses.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. All other repairs and maintenance are charged to the consolidated statements of profit or loss during the financial period in which they are incurred.

Land held for investment is not depreciated. Investment property, except for land, is depreciated using the straight-line method over their estimated useful lives of 20 to 40 years.

The depreciation method, the residual value and the useful life of an asset are reviewed at each financial year end and, if management judges that previous estimates should be adjusted, the change is accounted for as a change in an accounting estimate.

Impairment of Non-Financial Assets

Goodwill and intangible assets that have an indefinite useful life are not subject to amortization and are tested at least annually for impairment. At the end of each reporting period, assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized as 'profit or loss for the year' for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and its value in use. The value in use is measured by determining the estimated pre-tax cash flows based on past performance and its expectations of market development, and applying the pre-tax discount rates that reflect specific risks relating to the relevant operating segments. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

Trade Payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Trade payables are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities. Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method. Current trade payables measured initially at fair value are not significantly different from amortized cost using the effective interest method.

Borrowings

Borrowings are recognized initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the consolidated statements of profit or loss over the period of the borrowings using the effective interest method. The Group classifies the liability as current as long as it does not have an unconditional right to defer its settlement over 12 months after the end of the reporting period.

Financial Guarantee Contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due, in accordance with the original or modified terms of a debt instrument. Financial guarantees contracts provided by the Group are initially measured at fair value on the date the guarantee was given. Subsequent to initial recognition, the Group's liabilities under such guarantees are measured at the higher of the amounts below and recognized as 'other financial liabilities':

- The amount determined in accordance with Korean IFRS 1037, *'Provisions, Contingent Liabilities and Contingent Assets'*; or
- The initial amount, less accumulated amortization recognized in accordance with Korean IFRS 1018, *'Revenue'*.

Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events and an outflow of resources required to settle the obligation is probable and can be reliably estimated. The Group recognizes a warranty provision, a sales return provision, a provision for restoration, and a provision for litigation.

A warranty provision is accrued for the estimated costs of future warranty claims based on historical experience. Sales return provision is for the estimated sales returns based on historical results. Where the Group, as a tenant, is required to restore its leased assets to their original state at the end of the lease-term, the Group recognizes the present value of the estimated cost of restoration as a provision for restoration. When there is a probability that an outflow of economic benefits will occur from litigation or disputes, and whose amount is reasonably estimable, a corresponding amount of provision is recognized as a provision for litigation in the consolidated

financial statements.

A contingent liability is disclosed (Note 34) when;

- a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or
- a present obligation that arises from past events but is not recognized because: it is not
 probable that an outflow of resources embodying economic benefits will be required to settle
 the obligation; or the amount of the obligation cannot be measured with sufficient reliability.

Current and Deferred Income Tax

The tax expense for the year comprises current and deferred tax. Tax is recognized in the consolidated statements of profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case the tax is also recognized in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period in the countries where the Group operates and generates taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognized on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. It represents future tax consequences that will arise when recovering or settling the carrying amount of its assets and liabilities. However, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor tax profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the end of the reporting period and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences can be utilized.

Deferred income tax liabilities are provided on taxable temporary differences arising on investments in subsidiaries, associates and joint ventures, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred income tax assets are recognized only to the extent that it is probable that the deductible temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to

offset current tax assets against current tax liabilities and when the deferred income taxes assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention either to settle the balances on a net basis.

Employee Benefits

(a) Post-employment benefits

The Group operates various pension schemes. The schemes are generally funded through payments to insurance companies or trustee-administered funds, determined by periodic actuarial calculations. The Group operates both defined contribution and defined benefit plans.

A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate fund. The Group has no legal or constructive obligations to pay further contributions even if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. For the defined contribution plan, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The contributions are recognized as employee benefit expenses when an employee has rendered service. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

A defined benefit plan is a pension plan that is not a defined contribution plan. Typically defined benefit plans define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and salary levels. The liability recognized in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent qualified actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds and that have terms to maturity approximating to the terms of the related pension obligation. The remeasurements of the net defined benefit liabilities are recognized in other comprehensive income.

If any plan amendments, curtailments, or settlements occur, past service costs or any gains or losses on settlement are recognized as profit or loss for the year.

(b) Other long-term employee benefits

The Group provides other long-term employee benefits to their employees. The entitlement to these benefits is usually conditional on the employee working more than ten years. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. The Group recognizes past service cost, net interest on other long-term employee benefits and remeasurements as profit or loss for the year. These benefits are calculated annually by independent qualified actuaries.

(c) Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognizes termination benefits at the earlier of the following dates: when the entity can no longer withdraw the offer of those benefits or when the entity recognizes costs for a restructuring.

Share Capital

Ordinary shares and preferred shares without mandatory dividends or the obligation to be repaid are classified as equity.

Where the Parent Company purchases its own ordinary shares, the consideration paid, including any directly attributable incremental costs, is deducted from equity attributable to the Parent Company's equity holders until the shares are cancelled or reissued. Where such treasury shares are subsequently reissued, any consideration received is included in equity attributable to the Parent Company's equity holders.

Revenue Recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services in the ordinary course of the Group's activities. Revenue is shown net of value-added tax, returns, rebates and discounts.

The Group recognizes revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the entity and when specific criteria have been met for each of the Group's activities as described below. The revenue can be reliably measured only when any contingency related to sales is resolved. The Group bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

(a) Sales of goods

The Group manufactures and sells home appliances, mobile communication, TV, monitors, vehicle components and others. Sales of goods are recognized when the Group has delivered products to the customer. Delivery does not occur until the products have been shipped to the specified location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the sales contract, the acceptance provisions have lapsed, or the Group has objective evidence that all criteria for acceptance have been satisfied.

The products are often sold with volume discounts and customers have a right to return faulty products. Accumulated experience is used to estimate and provide for the discounts and returns. The volume discounts are assessed based on anticipated annual purchases. The Group recognizes provisions for product warranties and sales returns based on reasonable expectation reflecting warranty obligation and sales return rates incurred historically.

(b) Rendering of services

When the outcome of a transaction involving the rendering of services can be estimated reliably, revenue associated with such a transaction is recognized by reference to the percentage of completion of the services. Any changes in expected revenue, cost or the amount of services rendered are accounted for as changes in estimates. These changes in estimates may bring adjustments to the expected revenue or cost which is recognized in the statement of profit or loss in the period in which the management recognizes the changes in circumstances.

(c) Royalty income

Royalty income is recognized on an accrual basis in accordance with the substance of the relevant agreements.

(d) Other income

Income from rental, lease and others is recognized in income on a straight-line basis over the period of the contract.

(e) Interest income

Interest income is recognized using the effective interest method. When receivables are impaired, the Group reduces the carrying amount to its recoverable amount and continues unwinding the discount as interest income. Interest income on impaired receivables is recognized using the original effective interest rate.

(f) Dividend income

Dividend income is recognized when the right to receive payment is established.

Leases

A 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) Lessees

The Group classifies leases that do not transfer substantially all the risks and rewards of ownership incidental to ownership of assets as operating leases. Payments made under operating leases are charged to the consolidated statements of profit or loss on a straight-line basis over the period of the lease.

The Group classifies leases that transfer substantially all the risks and rewards of ownership incidental to ownership of assets as finance leases. Finance leases are capitalized as financial lease assets and liabilities at the lease's commencement at the lower of the fair value of the leased property and the present value of the minimum lease payments.

(b) Lessors

The Group classifies a lease that transfers substantially all the risks and rewards incidental to ownership of an asset at inception of the lease as a finance lease. A lease other than a finance lease is classified as an operating lease.

Lease income from operating lease is recognized on a straight-line basis over the lease term. 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.

Dividend Distribution

A dividend liability is recognized in the consolidated financial statements when the dividends are approved by the shareholders at their general meeting.

Earnings (loss) per Share

Basic earnings per share is calculated by dividing the profit attributable to shareholders of the Parent Company by the weighted average number of shares issued excluding shares purchased by the Parent Company that are held as treasury shares. Preferred shares have a right to participate in the profits of the Parent Company. These participation rights have been considered in presenting the EPS for ordinary shares and preferred shares.

Greenhouse Gas Emissions Rights (Allowances) and Obligations

Emission rights are defined as allowed amount of emissions that can be released, allocated by the Korean government as 'Act on the Allocation and Trading of Greenhouse-Gas Emission Permits' takes effect. Emission rights that are received free of charge from the government are measured at zero, while the rights purchased additionally from trading market such as the Korea Exchange are measured at acquisition cost. Emission rights are subsequently stated as acquisition cost less accumulated impairment loss. Emission liabilities are measured as the sum of the carrying amount of emission rights to be delivered to the government to settle the obligation for emissions occurred and expected expenditure required at the end of reporting period for any excess emissions. The emission rights and liabilities are classified as 'intangible assets' and 'provisions', respectively, in the consolidated statement of financial position.

3. Critical Accounting Estimates and Judgements

The estimates and judgements are continuously evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable.

Critical Accounting Estimates and Assumptions

The Group makes estimates and assumptions concerning the future. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The

resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing adjustments to the carrying amounts of assets and liabilities after the end of the reporting period are addressed below.

(a) Revenue Recognition

The Group recognizes revenue using the percentage of completion method for the rendering of service such as installation. When using the percentage of completion method, revenue shall be recognized in accordance with the progress of the transaction. It is calculated based on potential economic benefits and the estimated cost for the completion of the transaction. The factors for the estimation of revenue may vary.

(b) Impairment of Goodwill

The Group tests goodwill regularly for impairment. The recoverable amounts of cash-generating units have been determined based on fair value less costs of disposal or value-in-use calculations. These calculations require the use of estimates.

(c) Income Taxes

The Group recognizes assets and liabilities for anticipated tax audit issues based on the best estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the current and deferred income tax assets and liabilities in the period in which such determination is made.

(d) Fair Value of Financial Instruments

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Group uses its judgement to select a variety of methods and makes assumptions that are mainly based on market conditions existing at the end of each reporting period.

(e) Provisions

The Group recognizes provisions for product warranties and sales returns based on their historical data.

(f) Net Defined Benefit Liabilities

The present value of the defined benefit liability depends on various factors that are determined on an actuarial basis. The assumptions used in determining the net cost (income) for pensions include the discount rate, which is the interest rate that is used to determine the present value of estimated future cash outflows expected to be required to settle the defined benefit liability. In determining the appropriate discount rate, the Group considers the interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension liability. Other key assumptions for defined benefit liability are based on current market conditions.

Significant Judgement on Accounting Policies Adopted by the Group

In order to determine the Group's de-facto control, the Group considers the size of the Group's holding of voting rights relative to the size and dispersion of holdings of the other vote holders and additional facts and circumstances including voting patterns at previous shareholders' meetings.

4. Segment Information

The segments of the Group are strategic business divisions providing different products and services. They are reported separately because each business division requires different technologies and marketing strategies. The main products of each business division are as follows and the comparative information is presented in conformity with the same classification in the current period.

Operating segment	Type of products
Home Appliance & Air Solution (H&A)	Refrigerators, Washing machines, Residential and commercial air conditioners, Microwaves, Vacuum cleaners and others
Mobile Communications (MC)	Mobile communications
Home Entertainment (HE)	TVs, Monitors, PCs, Security devices, Audio, Video and others
Vehicle Components (VC)	Vehicle components and others
LG Innotek Co., Ltd. and its subsidiaries (Innotek)	LED, Display & Network, Substrate & Material, Optics solution, Auto & Motor and others
Other segments	Display materials, Lighting solutions, Solar energy systems and others

(a) The segment information for sales and operating profit(loss) for the years ended December 31, 2016 and 2015, is as follows:

	2016							
(in millions of Korean won)	H&A	MC	HE	VC	Innotek	Other segments ¹	Inter-segment transactions ²	Total
Sales	17,234,242	11,709,670	17,425,472	2,773,053	5,754,566	2,409,183	(1,939,153)	55,367,033
External sales	17,229,131	11,708,275	17,415,736	2,772,828	4,668,130	1,572,933	-	55,367,033
Internal sales	5,111	1,395	9,736	225	1,086,436	836,250	(1,939,153)	-
Operating profit(loss) ³	1,334,336	(1,259,089)	1,237,449	(63,229)	104,826	(16,530)	-	1,337,763
Depreciation and amortization	460,956	278,540	333,098	129,791	334,198	185,101	-	1,721,684

	2015							
(in millions of Korean won)	H&A	MC	HE	VC	Innotek	Other segments ¹	Inter-segment transactions ²	Total
Sales	16,531,291	14,003,430	17,397,568	1,832,387	6,138,129	2,435,156	(1,828,953)	56,509,008
External sales	16,527,476	14,003,172	17,390,418	1,832,377	4,812,177	1,943,388	-	56,509,008
Internal sales	3,815	258	7,150	10	1,325,952	491,768	(1,828,953)	-
Operating profit(loss) ³	981,664	(119,551)	57,265	5,017	223,685	44,211	-	1,192,291
Depreciation and amortization	470,795	297,823	390,655	93,791	461,721	186,841	-	1,901,626

¹ Other segments include operating segments that are not qualified as reportable segments and departments that support the operating segments and R&D.

² Sales between segments are accounted on terms equivalent to those that prevail in arm's length transactions.

³ Other income or expenses items not comprised in the operating profit (loss) are not separately disclosed because the Chief Operating Decision Maker does not review them by segment.

(b) Segment assets and liabilities as at December 31, 2016 and 2015, are as follows:

	December	31, 2016	December 31, 2015		
(in millions of Korean won)	Assets	Liabilities	Assets	Liabilities	
H&A	12,355,002	7,926,267	11,339,667	7,378,446	
MC	5,604,855	5,444,083	7,452,814	5,920,010	
HE	11,131,637	10,349,986	10,590,961	10,559,044	
VC	2,340,361	2,232,074	1,683,449	1,473,062	
Innotek	4,323,719	2,545,243	3,914,338	2,149,283	
Subtotal ¹	35,755,574	28,497,653	34,981,229	27,479,845	
Other segments and inter-segment transactions	2,099,695	(3,999,126)	1,332,667	(4,149,436)	
Total	37,855,269	24,498,527	36,313,896	23,330,409	

¹ The amounts of assets and liabilities of each segment are before inter-company elimination, and common assets and liabilities are allocated based on the operations of the segments.

External sales by geographic area for the years ended December 31, 2016 and 2015, and non-current assets by geographic area as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	External	sales	Non-current assets ²		
Geographic areas ¹	2016	2015	December 31, 2016	December 31, 2015	
Korea	14,592,974	14,311,194	10,384,327	9,544,117	
North America	16,583,035	16,396,260	325,580	334,591	
Asia	6,386,934	5,887,654	719,581	649,060	
Europe	5,869,241	5,814,259	246,580	263,568	
South America	3,894,923	4,298,969	160,959	154,903	
Middle East & Africa	3,663,018	4,699,928	116,334	189,698	
China	2,767,587	3,260,610	781,036	792,143	
Others	1,609,321	1,840,134	156,149	126,769	
Total	55,367,033	56,509,008	12,890,546	12,054,849	

¹ The comparative segment information by geographic areas is presented based on the current classification at the end of reporting period.

² Non-current assets consist of property, plant and equipment, intangible assets and investment properties.

(c) There is no external customer contributing to more than 10% of net sales for the years ended December 31, 2016 and 2015.

5. Financial Instruments by Category and Offsetting Financial Assets and Financial Liabilities

(a) Categorizations of financial instruments as of December 31, 2016 and 2015, are as follows:

	December 31, 2016						
(in millions of Korean won)	Financial assets at fair value through profit or loss	Loans and receivables	Available-for- sale financial assets	Held-to- maturity financial assets	Other	Total	
Cash and cash equivalents	-	3,015,137	-	-	-	3,015,137	
Deposits held by financial institutions	-	138,754	-	-	-	138,754	
Trade receivables	-	7,059,889	-	-	-	7,059,889	
Loans and other receivables	-	1,035,944	-	-	-	1,035,944	
Other financial assets	557	-	49,939	117	46,184	96,797	
Total	557	11,249,724	49,939	117	46,184	11,346,521	

(in millions of Korean won)	December 31, 2016							
	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Other	Total				
Trade payables	-	6,746,361	-	6,746,361				
Borrowings	-	8,659,011	-	8,659,011				
Other payables	-	3,204,506	-	3,204,506				
Other financial liabilities	8,041	-	86,300	94,341				
Total	8,041	18,609,878	86,300	18,704,219				

	December 31, 2015						
(in millions of Korean won)	Financial assets at fair value through profit or loss	Loans and receivables	Available-for- sale financial assets	Held-to- maturity financial assets	Other	Total	
Cash and cash equivalents	-	2,710,156	-	-	-	2,710,156	
Deposits held by financial institutions	-	157,424	-	-	-	157,424	
Trade receivables	-	7,093,352	-	-	-	7,093,352	
Loans and other receivables	-	1,160,929	-	-	-	1,160,929	
Other financial assets	13,806	-	54,406	2,638	34,634	105,484	
Total	13,806	11,121,861	54,406	2,638	34,634	11,227,345	

(in millions of Korean won)	December 31, 2015							
	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Other	Total				
Trade payables	-	6,086,975	-	6,086,975				
Borrowings	-	8,827,250	-	8,827,250				
Other payables	-	2,853,735	-	2,853,735				
Other financial liabilities	3,368	-	80,381	83,749				
Total	3,368	17,767,960	80,381	17,851,709				

(b) Net gains or losses on each category of financial instruments for the years ended December 31, 2016 and 2015, are as follows:

	2016					
(in millions of Korean won)	Financial assets at fair value through profit or loss	Loans and receivables	Available-for- sale financial assets	Held-to- maturity financial assets	Other	Total
Interest income	-	94,621	19	64	-	94,704
Exchange differences	-	399,146	-	-	-	399,146
Bad debt expenses	-	58,969	-	-	-	58,969
Loss on disposal of trade receivables	-	(15,447)	-	-	-	(15,447)
Gain on disposal of available-for- sale financial assets	-	-	368	-	-	368
Impairment loss of available-for- sale financial assets	-	-	(9,897)	-	-	(9,897)
Dividend income	-	-	286	-	-	286
Gain on derivatives (through profit or loss)	23,813	-	-	-	-	23,813
Loss on valuation of available- for-sale financial assets, net of tax (through other comprehensive income)	-	-	(377)	-	-	(377)
Loss on derivatives, net of tax (through other comprehensive loss)	-	-	-	-	(3,127)	(3,127)

	2016						
(in millions of Korean won)	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Other	Total			
Interest expenses	-	(366,332)	(51,980)	(418,312)			
Exchange differences	-	(635,897)	(23,085)	(658,982)			
Loss on derivatives (through profit or loss)	(71,460)	-	-	(71,460)			
Loss on derivatives, net of tax (through other comprehensive loss)	-	-	181	181			
Others	-	(2,051)	414	(1,637)			

			2015			
(in millions of Korean won)	Financial assets at fair value through profit or loss	Loans and Receivables	Available-for- sale financial assets	Held-to- maturity financial assets	Other	Total
Interest income	-	93,218	108	86	-	93,412
Exchange differences	-	445,655	-	-	-	445,655
Bad debt expenses	-	(15,267)	-	-	-	(15,267)
Loss on disposal of trade receivables	-	(22,370)	-	-	-	(22,370)
Gain on disposal of available-for- sale financial assets	-	-	8,217	-	-	8,217
Impairment loss of available-for- sale financial assets	-	-	(3,776)	-	-	(3,776)
Dividend income	-	-	815	-	-	815
Gain on derivatives (through profit or loss)	82,012	-	-	-	-	82,012
Profit for the period from discontinued operations	7	2,108	-	-	-	2,115
Gain on valuation of available- for-sale financial assets, net of tax (through other comprehensive income)	-	-	2,426		-	2,426
Gain on derivatives, net of tax (through other comprehensive income)	-	-	-	-	3,108	3,108

		2015		
(in millions of Korean won)	Financial liabilities at fair value through profit or loss	Financial liabilities carried at amortized cost	Other	Total
Interest expenses	-	(397,717)	(54,475)	(452,192)
Exchange differences	-	(1,051,779)	183,589	(868,190)
Loss on derivatives (through profit or loss)	(31,892)	-	-	(31,892)
Loss for the period from discontinued operations	(2)	(669)	-	(671)
Loss on derivatives, net of tax (through other comprehensive loss)	-	-	(22,956)	(22,956)
Others	-	(6,284)	106	(6,178)

(c) Recognized financial instruments that are subject to an enforceable master netting arrangements or similar arrangements as of December 31, 2016 and 2015, are as follows:

	2016						
		Recognized	Net amounts presented in	Amounts r			
(in millions of Korean won)	Recognized financial instrument	financial instrument offset	the statement of financial position	Financial instruments	Cash collateral	Net amount	
Financial assets							
Trade receivables	209,703	(196,621)	13,082	-	-	13,082	
Financial liabilities							
Trade payables	331,230	(196,621)	134,609	-	-	134,609	

	2015						
		Recognized	Net amounts	Amounts n			
(in millions of Korean won)	Recognized financial instrument	financial instrument offset	presented in the statement of financial position	Financial instruments	Cash collateral	Net amount	
Financial assets							
Trade receivables	205,422	(190,186)	15,236	-	-	15,236	
Financial liabilities							
Trade payables	313,048	(190,186)	122,862	-	-	122,862	

6. Cash and Cash Equivalents, and Deposits held by Financial Institutions

(a) Cash and cash equivalents

Cash and cash equivalents in the consolidated statements of financial position are equal to the cash and cash equivalents in the consolidated statements of cash flows. Details are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Cash on hand	479	380
Bank deposits	3,014,658	2,709,776
Total	3,015,137	2,710,156

(b) Deposits held by financial institutions

The deposits held by financial institutions restricted in use as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Current		
Fund for business cooperation	80,500	80,500
Others	59	-
Subtotal	80,559	80,500
Non-current		
Deposit for drawing a bill	21,161	36,376
Deposit for checking account	225	228
National project	1,122	1,232
Others	35,654	32,060
Subtotal	58,162	69,896
Total	138,721	150,396

7. Trade Receivables and Other Receivables

(a) Trade receivables and other receivables, net of allowance for doubtful accounts, as of December 31, 2016 and 2015, are as follows:

	December 31, 2016			December 31, 2015			
		Allowance for		Allowance for			
(in millions of Korean won)	Original amount	doubtful accounts	Carrying amount	Original amount	doubtful accounts	Carrying amount	
Trade receivables	7,146,370	(86,481)	7,059,889	7,237,329	(143,977)	7,093,352	
Other receivables							
Current	562,105	(16,339)	545,766	670,776	(16,635)	654,141	
Non-current	490,293	(115)	490,178	506,907	(119)	506,788	

(b) Details of other receivables as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Current		
Loans	50,040	45,378
Non-trade receivables	257,527	356,570
Accrued income	217,056	229,490
Deposits	21,143	22,703
Subtotal	545,766	654,141
Non-current		
Loans	82,009	110,274
Non-trade receivables	17,250	7,700
Deposits	390,919	388,814
Subtotal	490,178	506,788
Total	1,035,944	1,160,929

(c) The aging analysis of trade receivables and other receivables as of December 31, 2016 and 2015, is as follows:

	December 31, 2016				December 31, 2015			
(in millions of	Trade	Other re	eceivables		Trade	Other receivables		
Korean won)	receivables	Current	Non-current	Total	receivables	Current	Non-current	Total
Receivables not past due	6,298,870	523,760	480,884	7,303,514	6,039,338	606,189	504,877	7,150,404
Past due but not impaired								
Up to 6 months	712,345	10,261	9,407	732,013	998,920	21,653	1,985	1,022,558
7 to 12 months	15,324	9,087	2	24,413	86,335	21,091	1	107,427
Over 1 year	11,461	6,014	-	17,475	12,725	5,693	44	18,462
Subtotal	739,130	25,362	9,409	773,901	1,097,980	48,437	2,030	1,148,447
Impaired	108,370	12,983	-	121,353	100,011	16,150	-	116,161
Total	7,146,370	562,105	490,293	8,198,768	7,237,329	670,776	506,907	8,415,012

- (d) The allowance for doubtful accounts is recognized based on aging analysis and historical experience.
- (e) The Group classifies individually impaired receivables as defaulted receivables if the receivables are impaired due to reasons including bankruptcy and insolvency of the debtors. Defaulted receivables are classified into two categories of rehabilitation related receivables and other defaulted receivables. The Group performs impairment test on rehabilitation related receivables based on expected repayment amount and recognizes impairment loss on other defaulted receivables based on types and values of collaterals.
- (f) Movements in allowance for doubtful accounts for the years ended December 31, 2016 and 2015, are as follows:

			2016		
(in millions of Korean won)	At Jan. 1	Addition (reversal)	Write-off	Other	At Dec. 31
Trade receivables	143,977	(59,186)	(12,971)	14,661	86,481
Other receivables					
Current	16,635	144	(2,704)	2,264	16,339
Non-current	119	73	-	(77)	115

			2015		
(in millions of Korean won)	At Jan. 1	Addition	Write-off	Other	At Dec. 31
Trade receivables	127,865	13,575	(10,639)	13,176	143,977
Other receivables					
Current	19,180	133	(1,949)	(729)	16,635
Non-current	60	59	-	-	119

The bad debt expenses of trade receivables have been included in selling and marketing expenses' in the consolidated statements of profit or loss and the bad debt expenses of other receivables have been included in 'other non-operating expenses'. Amounts charged to the allowance account are generally reversed when reasons for allowance are resolved, or written off when there is no expectation of recovering additional cash.

(g) There are no financial assets transferred but not derecognized in their entirety, and no associated liabilities recognized as of December 31, 2016.

8. Other Financial Assets and Liabilities

(a) Details of other financial assets and liabilities as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Other financial assets		
Derivatives	46,741	48,440
Available-for-sale	49,939	54,406
Held-to-maturity	117	2,638
Total	96,797	105,484
Current	30,650	20,674
Non-current	66,147	84,810
Other financial liabilities		
Derivatives	94,227	83,170
Financial guarantee liability	114	579
Total	94,341	83,749
Current	21,115	13,823
Non-current	73,226	69,926

(b) Details of derivatives as of December 31, 2016 and 2015, are as follows:

December	31, 2016	December 31, 2015		
Assets	Liabilities	Assets	Liabilities	
557	8,041	13,806	3,368	
30,093	12,960	4,347	10,184	
30,650	21,001	18,153	13,552	
16,091	-	30,287	-	
-	73,226	-	69,618	
16,091	73,226	30,287	69,618	
46,741	94,227	48,440	83,170	
	Assets 557 30,093 30,650 16,091 - 16,091 - 16,091	557 8,041 30,093 12,960 30,650 21,001 16,091 - - 73,226 16,091 73,226	Assets Liabilities Assets 557 8,041 13,806 30,093 12,960 4,347 30,650 21,001 18,153 16,091 - 30,287 - 73,226 - 16,091 73,226 30,287	

The details of major derivative contracts at the end of the reporting period are presented in Note 37.

- (c) Available-for-sale financial assets
 - i) Changes in available-for-sale financial assets for the years ended December 31, 2016 and 2015, are as follows:

				2016			
(in millions of Korean won)	At Jan. 1	Acquisition	Disposal	Valuation (OCI)	Impairment	Other	At Dec. 31
Listed equity securities	15,329	-	-	(488)	-	(4)	14,837
Unlisted equity securities	37,875	8,516	(2,095)	-	(9,267)	73	35,102
Debt securities	1,202	-	(476)	-	(630)	(96)	-
Total	54,406	8,516	(2,571)	(488)	(9,897)	(27)	49,939

	2015							
(in millions of Korean won)	At Jan. 1	Acquisition	Disposal	Valuation (OCI)	Impairment	Other	At Dec. 31	
Listed equity securities	13,107	-	(1,369)	4,588	-	(997)	15,329	
Unlisted equity securities	34,356	7,625	(1,570)	-	(3,776)	1,240	37,875	
Debt securities	1,422	-	(87)	(14)	-	(119)	1,202	
Total	48,885	7,625	(3,026)	4,574	(3,776)	124	54,406	

- ii) The listed equity securities among the above equity securities are measured using quoted prices in active markets. However, the unlisted equity securities are measured at cost as they are mostly in the beginning of their business stages and their fair values cannot be reliably measured.
- iii) During the year ended December 31, 2016, the unlisted equity securities amounting to \ 2,095 million (2015: \ 1,570 million), whose fair value could not be measured reliably and therefore measured at cost, have been derecognized as a result of disposal or return of capital investments. Accordingly, a gain on disposal amounting to \ 318 million (2015: \ 6,845 million) was recognized as profit and loss for the year ended December 31, 2016.
- iv) For the years ended December 31, 2016 and 2015, there is no accumulated other comprehensive income recognized for listed equity securities that was reclassified to impairment loss.
- v) For the year ended December 31, 2016, the Group disposed unlisted debt securities that the carrying amount is not significant, and gain on disposal amounting to \50 million (2015: nil) was recognized as other non-operating income.
- vi) There is no available-for-sale financial assets held for sale as of December 31, 2016.

- (d) Held-to-maturity financial assets
 - i) Maturity analysis of held-to-maturity financial assets as of December 31, 2016 and 2015, is as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Within 1 year	-	2,521
1 to 5 years	117	117

ii) The amount recognized as interest income in relation to held-to-maturity financial assets for the year ended December 31, 2016, is ₩64 million (2015: ₩86 million). No impairment losses were recognized in relation to held-to-maturity financial assets for the years ended December 31, 2016 and 2015.

9. Inventories

(a) Inventories as of December 31, 2016 and 2015, consist of:

	Dec	ember 31, 201	6	December 31, 2015				
(in millions of Korean won)	Cost	Valuation allowance	Carrying amount	Cost	Valuation allowance	Carrying amount		
Finished products and merchandise	3,045,592	(115,657)	2,929,935	2,945,563	(91,114)	2,854,449		
Work-in-process	340,980	(13,851)	327,129	297,787	(9,474)	288,313		
Raw materials and supplies	1,679,482	(90,740)	1,588,742	1,486,266	(50,777)	1,435,489		
Other	366,335	(41,126)	325,209	326,974	(32,549)	294,425		
Total	5,432,389	(261,374)	5,171,015	5,056,590	(183,914)	4,872,676		

- (b) The cost of inventories recognized as expense and included in 'Cost of sales' in 2016 amounts to ₩40,024,768 million (2015: ₩42,214,803 million) and 'Loss on valuation of inventories' amounts to ₩286,047 million (2015: ₩174,064 million) from continuing operations. The cost of inventories recognized as expense and included in 'Cost of sales' in 2015 amounts to ₩20,871 million and 'Loss on valuation of inventories' amounts to ₩4,747 million from discontinued operations.
- (c) There is no inventory provided as collateral for borrowings as of December 31, 2016.

10. Other Assets

Details of other assets as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Current:		
Advances	67,810	52,534
Prepaid expenses	289,812	278,616
Prepaid value added tax	573,798	463,077
Subtotal	931,420	794,227
Non-current:		
Long-term prepaid expenses	393,191	425,295
Long-term advances	306,382	294,756
Other investment assets	185	158
Subtotal	699,758	720,209
Total	1,631,178	1,514,436

11. Property, Plant and Equipment

(a) Details of property, plant and equipment as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	Land	Buildings	Structures	Machinery	Tools	Equipment	Other	Construction -in-progress	Total
At December 31, 2016									
Acquisition cost	2,823,449	5,987,432	385,322	6,688,499	3,419,268	829,514	435,742	1,100,009	21,669,235
Accumulated depreciation	-	(1,592,917)	(170,298)	(4,773,401)	(2,839,744)	(627,771)	(195,232)	-	(10,199,363)
Accumulated impairment	-	(129,718)	(1,060)	(96,780)	(8,135)	(986)	(1,082)	-	(237,761)
Government grants	(6,035)	(500)	(11)	(2,379)	(704)	(54)	-	-	(9,683)
Net book amount	2,817,414	4,264,297	213,953	1,815,939	570,685	200,703	239,428	1,100,009	11,222,428

(in millions of Korean won)	Land	Buildings	Structures	Machinery	Tools	Equipment	Other	Construction -in-progress	Total
At December 31, 2015									
Acquisition cost	2,825,800	5,757,725	356,250	6,443,032	3,481,084	890,708	337,211	456,322	20,548,132
Accumulated depreciation	-	(1,403,977)	(157,349)	(4,641,064)	(2,849,200)	(667,962)	(176,232)	-	(9,895,784)
Accumulated impairment	-	(129,631)	(894)	(41,145)	(6,767)	(1,274)	(981)	-	(180,692)
Government grants	(5,991)	(686)	-	(3,111)	(1,253)	(317)	-	-	(11,358)
Net book amount	2,819,809	4,223,431	198,007	1,757,712	623,864	221,155	159,998	456,322	10,460,298

(b) Changes in property, plant and equipment for the years ended December 31, 2016 and 2015, are as follows:

					2016				
(in millions of Korean won)	Land	Buildings	Structures	Machinery	Tools	Equipment	Other	Construction -in-progress	Total
At January 1, 2016	2,819,809	4,223,431	198,007	1,757,712	623,864	221,155	159,998	456,322	10,460,298
Acquisitions ¹	(6,745)	81,551	15,486	247,746	217,729	66,283	103,425	1,577,020	2,302,495
Transfer-in(out)	3,427	186,905	14,655	492,898	150,599	5,484	78,998	(932,966)	-
Disposals and others	(1,791)	(6,943)	(1,368)	(48,151)	(14,371)	(4,161)	(46,275)	(483)	(123,543)
Depreciation	-	(193,420)	(15,327)	(572,099)	(398,478)	(86,159)	(56,625)	-	(1,322,108)
Impairment ²	3,395	(1,758)	(729)	(66,111)	(5,773)	(518)	(219)	-	(71,713)
Exchange differences	(681)	(25,469)	3,229	3,944	(2,885)	(1,381)	126	116	(23,001)
At December 31, 2016	2,817,414	4,264,297	213,953	1,815,939	570,685	200,703	239,428	1,100,009	11,222,428

					2015				
(in millions of Korean won)	Land	Buildings	Structures	Machinery	Tools	Equipment	Other	Construction -in-progress	Total
At January 1, 2016	2,375,196	4,337,250	195,758	1,881,084	677,935	244,728	158,933	725,969	10,596,853
Acquisitions	69,383	128,033	7,386	198,072	254,716	68,715	54,631	971,988	1,752,924
Acquisitions from business combination	-	-	-	-	2,192	298	23	8,505	11,018
Transfer-in(out)	414,939	36,940	16,145	470,048	170,244	7,908	5,379	(1,243,849)	(122,246)
Disposals and others	(28,349)	(11,944)	(440)	(28,924)	(10,133)	(322)	(3,914)	(633)	(84,659)
Decrease due to transfer of business	(8,192)	(11,256)	(271)	(308)	(1,107)	(3,546)	(2,200)	(12)	(26,892)
Depreciation	-	(189,917)	(15,527)	(703,256)	(462,981)	(92,429)	(50,044)	-	(1,514,154)
Impairment	(2,869)	(22,659)	(727)	(30,430)	(3,913)	(787)	(338)	-	(61,723)
Exchange differences	(299)	(43,016)	(4,317)	(28,574)	(3,089)	(3,410)	(2,472)	(5,646)	(90,823)
At December 31, 2016	2,819,809	4,223,431	198,007	1,757,712	623,864	221,155	159,998	456,322	10,460,298

¹ It includes settlement of land purchase price.

² Divisions in Innotek and other segments, managed as a separate cash-generating unit (hereafter 'CGU'), have been tested for impairment as accumulation of operating losses has been experienced and a future downturn in sales is expected. And impairment loss of #45,670 million (Innotek: #42,733 million, other segments: #2,937 million) was recognized as 'other non-operating expenses'. This impairment loss was allocated to tools, machinery, and others since there was no goodwill allocated to the CGU. The recoverable amount was measured at the higher of fair value less costs of disposal or value-in-use, and the fair value amount is categorized within 'Level 3' of fair value hierarchy. The pre-tax discount rate used for Innotek segment value-in-use calculation was 6.2%.

(c) Line items including depreciation in the consolidated statements of profit or loss for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015	
Continuing operations:			
Cost of sales	1,051,539	1,207,788	
Selling and marketing expenses	45,353	47,317	
Administrative expenses	78,461	87,429	
Research and development expense	109,776	123,477	
Service costs	14,297	16,174	
Other non-operating expenses	22,682	31,834	
Subtotal	1,322,108	1,514,019	
Discontinued operations	-	135	
Total	1,322,108	1,514,154	

(d) Capitalized borrowing costs and capitalization rates for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
Capitalized borrowing costs	16,382	23,369
Capitalization rate(%)	3.91	4.33

- (e) Details of property, plant and equipment provided as collateral as of December 31, 2016 and 2015, are as follows:
 - i) List of collateral for the Group

			December	31, 2016	
(in millions of Korean won)	Carrying amount	Secured amount	Related line item	Related amount	Secured party
Land, Building	230,363	219,606	Borrowings and others	101,640	Korea Development Bank and others
Machinery and others	17,743	17,739	Borrowings	1,709	Saudi Industrial Development Fund

			r 31, 2015		
(in millions of Korean won)	Carrying amount	Secured amount	Related line item	Related amount	Secured party
Land, Building	240,120	222,633	Borrowings and others	110,005	Korea Development Bank and others
Machinery and others	19,864	19,864	Borrowings	6,019	Saudi Industrial Development Fund

ii) List of collateral for external parties

The carrying amount of buildings pledged as collateral to guarantee the land lessor's obligation to the mortgagee, Nonghyup Bank and others, is #266 million as of December 31, 2016 (2015: #606 million) within the secured amount of up to #9,120 million (2015: #6,850 million).

12. Intangible assets

(a) Details of intangible assets as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	Goodwill	Industrial property rights	Development costs	Membership rights	Other Intangible assets	Construction- in-progress	Total
At December 31, 2016							
Acquisition cost	150,917	900,094	2,232,992	82,463	829,746	269,350	4,465,562
Accumulated amortization and impairment	(5,481)	(423,121)	(1,855,502)	(2,631)	(607,740)		(2,894,475)
Net book amount	145,436	476,973	377,490	79,832	222,006	269,350	1,571,087
At December 31, 2015							
Acquisition cost	150,882	860,626	2,016,667	82,555	814,125	145,209	4,070,064
Accumulated amortization and impairment	(1,214)	(419,586)	(1,620,039)	(1,668)	(554,277)		(2,596,784)
Net book amount	149,668	441,040	396,628	80,887	259,848	145,209	1,473,280

(b) Changes in intangible assets for the years ending December 31, 2016 and 2015, are as follows:

	2016							
(in millions of Korean won)	Goodwill	Industrial property rights	Development costs	Membership rights	Other intangible assets	Construction- in-progress	Total	
At January 1, 2016	149,668	441,040	396,628	80,887	259,848	145,209	1,473,280	
Acquisitions	-	127,575	12,282	-	35,354	46,002	221,213	
Acquisitions by internal development	-	-	11,489	-	2,153	307,259	320,901	
Transfer-in(out)	-	-	210,321	-	13,114	(223,435)	-	
Disposals and others	-	(7,631)	(179)	(131)	(2,062)	(4,015)	(14,018)	
Amortization	-	(83,689)	(251,825)	-	(85,360)	-	(420,874)	
Impairment ¹	(4,267)	(316)	(1,271)	(909)	(1,369)	(1,683)	(9,815)	
Exchange differences	35	(6)	45	(15)	328	13	400	
At December 31, 2016	145,436	476,973	377,490	79,832	222,006	269,350	1,571,087	

	2015						
(in millions of Korean won)	Goodwill	Industrial property rights	Development costs	Membership rights	Other intangible assets	Construction- in-progress	Total
At January 1, 2015	145,819	436,556	342,694	82,710	235,938	150,619	1,394,336
Acquisitions	-	100,764	23,467	577	93,157	64,934	282,899
Acquisitions by internal development	-	-	22,547	-	-	225,405	247,952
Increase due to business combination	5,481	975	57	-	12,937	1,228	20,678
Transfer-in(out)	-	-	272,406	-	19,082	(291,488)	-
Disposals and others	-	(5,767)	(16,737)	(643)	(523)	(3,321)	(26,991)
Decrease due to transfer of business	(220)	(11,142)	-	(851)	(6,163)	(30)	(18,406)
Amortization	-	(79,827)	(246,387)	-	(92,490)	-	(418,704)
Impairment	(1,214)	(519)	(1,304)	(926)	(1,097)	(2,071)	(7,131)
Exchange differences	(198)	-	(115)	20	(993)	(67)	(1,353)
At December 31, 2015	149,668	441,040	396,628	80,887	259,848	145,209	1,473,280

¹ Divisions in Innotek and other segments, managed as a separate cash-generating unit (hereafter 'CGU'), have been tested for impairment as accumulation of operating losses has been experienced and a future downturn in sales is expected. And impairment loss of \ 4,685 million (Innotek: \4,267 million, other segments: \418 million) was recognized as 'other non-operating expenses'. The impairment loss of \4,267 million was allocated to goodwill and \418 million was allocated to patents, software and others. The recoverable amount was measured at the higher of fair value less costs of disposal and value in use, and the fair value amount is categorized within 'Level 3' of fair value hierarchy.

(c) Line items including amortization of intangible assets for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
Continuing operations:		
Cost of sales	222,978	217,034
Selling and marketing expenses	15,829	27,293
Administrative expenses	95,039	106,661
Research and development expenses	84,743	65,595
Service costs	2,285	2,119
Subtotal	420,874	418,702
Discontinued operations	-	2
Total	420,874	418,704

(d) Capitalized borrowing costs and capitalization rates of intangible assets used for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
Capitalized borrowing costs	85	36
Capitalization rate (%)	3.51	3.79

- (e) There are no intangible assets pledged as collateral for borrowings as of December 31, 2016.
- (f) Impairment tests for goodwill
 - Goodwill is allocated among the Group's cash-generating units (CGUs) based on operating segments. As of December 31, 2016, an operating segment-level summary of goodwill allocation is presented below:

(in millions of Korean won)	H&A	MC	Other	Total
Goodwill	64,531	29,894	51,011	145,436

- ii) The recoverable amount of CGUs has been determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on financial budgets approved by the management covering a four-year period. Cash flows beyond the four-year period are extrapolated using the estimated growth rate which does not exceed the long-term average growth rate for the electronic industry in which the Group operated.
- iii) Management determined the estimated pre-tax cash flow based on past performance and its expectations of market development. Value-in-use is measured by applying the pre-tax discount rates reflecting specific risks relating to the relevant operating segments. Discount rates and nominal long-term growth rates used for calculating the value-in-use of major operating segments are as follows:

	H&A	MC	Other	
Discount rates	11.3%	14.6%	8.2%	
Nominal long-term growth rates	2.1%	3.0%	2.9%	

- iv) During the year ended December 31, 2016, impairment loss on goodwill, amounting to \4,267 million, was recognized on the basis of recoverable amounts of a CGU determined based on fair value less costs of disposal.
- (g) Research and development expenses

Research and development expenses for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015	
Continuing operations:			
Uncapitalized research and development expenditures	3,567,437	3,572,117	
Amortization from internally capitalized development costs	167,267	151,273	
Subtotal	3,734,704	3,723,390	
Discontinued operations		-	
Total	3,734,704	3,723,390	

13. Investments in Associates and Joint Ventures

- (a) Investments in associates and joint ventures
 - i) Carrying amounts of investments in associates and joint ventures, as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Associates	4,906,450	4,648,197
Joint ventures	198,108	193,664
Total	5,104,558	4,841,861

ii) Investments in associates as of December 31, 2016 and 2015, are as follows:

	December 31, 2016				December 31, 2015			
(in millions of Korean won)	Acquisition cost	Net asset amount	Unrealized gain	Carrying amount	Acquisition cost	Net asset amount	Unrealized gain	Carrying amount
LG Display Co., Ltd.	679,218	4,910,781	(72,971)	4,837,810	679,218	4,621,566	(59,197)	4,562,369
Ericsson-LG Co., Ltd	26,629	50,796	(30)	50,766	26,629	78,983	(49)	78,934
Hitachi-LG Data Storage Inc.(HLDS)	91,250	(17,640)	(1,496)	-	51,184	(19,761)	(1,482)	-
Korea Information Certificate Authority Inc.	1,988	5,167	-	5,167	852	3,605	-	3,605
LG Fuel Cell Systems Inc.	69,375	9,222	-	9,222	44,051	(77)	-	-
SKT Vietnam PTE., Ltd.	72,194	815	-	-	72,194	793	-	-
One-Red, LLC ¹	3,128	3,485	-	3,485	3,128	3,289	-	3,289
Total	943,782	4,962,626	(74,497)	4,906,450	877,256	4,688,398	(60,728)	4,648,197

¹ The financial statements as of November 30, 2016 were used due to a different closing date.

iii) Investments in joint ventures as of December 31, 2016 and 2015, are as follows:

		Decembe	r 31, 2016		December 31, 2015				
(in millions of Korean won)	Acquisition cost	Net asset amount	Unrealized gain	Carrying amount	Acquisition cost	Net asset amount	Unrealized gain	Carrying amount	
LG Holdings(HK) Ltd.	115,234	141,768	-	141,768	115,234	137,638	-	137,638	
Arcelic-LG Klima Sanayi ve Ticarta A.S.(LGEAT)	14,718	41,377	(726)	40,651	14,718	41,417	(134)	41,283	
EIC PROPERTIES PTE LTD.	9,636	14,493	-	14,493	9,636	14,063	-	14,063	
LG-MRI LLC	516	1,196	-	1,196	516	680	-	680	
Total	140,104	198,834	(726)	198,108	140,104	193,798	(134)	193,664	

- (b) Associates and joint ventures
 - i) Associates as of December 31, 2016, are as follows:

Name of associate	Location	Closing month	Percentage of ownership	Nature of relationships with the Group
LG Display Co., Ltd.	Korea	December	37.9%	Production and supply of display products
Ericsson-LG Co., Ltd	Korea	December	25.0%	Supply of communication devices and network solution products
Hitachi-LG Data Storage Inc.(HLDS)	Japan	December	49.0%	Production and supply of data storages
Korea Information Certificate Authority Inc. ¹	Korea	December	7.3%	Certificate services
LG Fuel Cell Systems Inc.	USA	December	32.2%	R&D of fuel cell
SKT Vietnam PTE., Ltd.	Singapore	December	25.4%	Communication services
One-Red, LLC	USA	March	25.0%	DVD related patent licensing

¹ Classified as an associate although the percentage of ownership is less than 20% because the Group can exercise a significant influence in the Board of Directors of the investee.

ii) Joint ventures as of December 31, 2016, are as follows:

All joint arrangements, over which the Group has joint control, are structured through separate companies and are categorized as joint ventures as the parties with joint control are assumed to have rights to the net assets of the arrangement.

Name of joint venture	Location	Closing month	Percentage of ownership	Nature of relationships with the Group
LG Holdings(HK) Ltd.	China	December	49.0%	Real estate
Arcelic-LG Klima Sanayi ve Ticarta A.S.(LGEAT)	Turkey	December	50.0%	Production and supply of air conditioning products
EIC PROPERTIES PTE LTD.	Singapore	December	38.2%	Real estate
LG-MRI LLC	USA	December	50.0%	Production and supply of digital display products

iii) All associates and joint ventures are accounted for using the equity method.

- (c) Changes in investments in associates and joint ventures
 - i) Changes in the carrying amounts of investments in associates for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)					2016				
	Beginning balance	Acquisition	Share of profit(loss) ¹	Other comprehen - sive income(ex cluding remeasure ment)	Remeasure- ment component	Dividend/ recovery	Exchange difference	Changes in ownership interest over associates	Ending balance
LG Display Co., Ltd.	4,562,369	-	330,132	(31,586)	44,708	(67,813)	-	-	4,837,810
Ericsson-LG Co., Ltd	78,934	-	(527)	947	162	(28,750)	-	-	50,766
Hitachi-LG Data Storage Inc.(HLDS)	-	40,066	(40,066)	-	-	-	-	-	-
Korea Information Certificate Authority Inc.	3,605	1,136	458	38	-	(70)	-	-	5,167
LG Fuel Cell Systems Inc.	-	25,324	(16,117)	14	1	-	-	-	9,222
SKT Vietnam PTE., Ltd.	-	-	-	-	-	-	-	-	-
One-Red, LLC	3,289	-	89	-	-	-	107	-	3,485
Total	4,648,197	66,526	273,969	(30,587)	44,871	(96,633)	107	-	4,906,450

(in millions of Korean won)					2015				
<u></u>	Beginning balance	Acquisition	Share of profit(loss)	Other comprehen - sive income(ex cluding remeasure ment)	Remeasure- ment component	Dividend/ recovery	Exchange difference	Changes in ownership interest over associates	Ending balance
LG Display Co., Ltd.	4,283,151	-	357,000	21,939	(31,908)	(67,813)	-	-	4,562,369
Ericsson-LG Co., Ltd	77,350	-	3,564	742	528	(3,250)	-	-	78,934
Hitachi-LG Data Storage Inc.(HLDS)	-	-	-	-	-	-	-	-	-
Global OLED Technology LLC.	28,598	-	-	-	-	(28,598)	-	-	-
Korea Information Certificate Authority Inc.	3,240	-	364	61	-	(60)	-	-	3,605
LG Fuel Cell Systems Inc.	12,818	-	(12,505)	(305)	(8)	-	-	-	-
SKT Vietnam PTE., Ltd.	-	-	-	-	-	-	-	-	-
One-Red, LLC	2,934	-	(191)	-	-	-	546	-	3,289
Total	4,408,091	-	348,232	22,437	(31,388)	(99,721)	546	-	4,648,197

¹ The Group recognized additional equity method loss of #19,059 million for loans of Hitachi-LG Data Storage Inc. and others in 2016.

ii) Changes in the carrying amounts of investments in joint ventures for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)					2016				
	Beginning balance	Acquisition	Share of profit(loss)	Other comprehen - sive income(ex cluding remeasure ment)	Remeasure- ment component	Dividend/ recovery	Exchange difference	Changes in ownership interest over associates	Ending balance
LG Holdings(HK) Ltd.	137,638	-	6,763	(2,633)	-	-	-	-	141,768
Arcelic-LG Klima Sanayi ve Ticarta A.S.(LGEAT)	41,283	-	6,264	(6,896)	-	-	-	-	40,651
EIC PROPERTIES PTE LTD.	14,063	-	325	105	-	-	-	-	14,493
LG-MRI LLC	680	-	476	-	-	-	40	-	1,196
Total	193,664	-	13,828	(9,424)	-	-	40	-	198,108

(in millions of Korean won)					2015				
	Beginning balance	Acquisition	Share of profit(loss)	Other comprehen - sive income(ex cluding remeasure ment)	Remeasure- ment component	Dividend/ recovery	Exchange difference	Changes in ownership interest over associates	Ending balance
LG Holdings(HK) Ltd.	127,256	-	7,457	2,925	-	-	-	-	137,638
Arcelic-LG Klima Sanayi ve Ticarta A.S.(LGEAT)	44,563	-	3,557	(6,837)	-	-	-	-	41,283
EIC PROPERTIES PTE LTD.	13,912	-	207	(56)	-	-	-	-	14,063
LG-MRI LLC	639	-	57	-	-	-	(16)	-	680
Total	186,370	-	11,278	(3,968)	-	-	(16)	-	193,664

- (d) Summarized financial information of the associates that are material to the reporting entity as of December 31, 2016 and 2015, and for the years ended December 31, 2016 and 2015 is as follows:
 - LG Display Co., Ltd. and its subsidiaries

December 31, 2010	December 31, 2015
10,484,186	9,531,634
14,400,150	13,045,526
24,884,336	22,577,160
7,058,219	6,606,712
4,363,729	3,265,492
11,421,948	9,872,204
12,955,997	12,192,952
506,391	512,004
13,462,388	12,704,956
	14,400,150 24,884,336 7,058,219 4,363,729 11,421,948 12,955,997 506,391

(in millions of Korean won)	2016	2015
Net sales	26,504,074	28,383,884
Profit for the year	931,508	1,023,456
Equity attributable to the owners of		
LG Display Co., Ltd.		
Profit for the year	906,713	966,553
Other comprehensive income, net of tax	35,240	(26,105)
Total comprehensive income, net of tax	941,953	940,448
Dividends from associates	67,813	67,813

- (e) Reconciliations of the summarized financial information of associates that are material to the reporting entity to the carrying amount of the Group's interest for the years ended December 31, 2016 and 2015, are as follows:
 - LG Display Co., Ltd. and its subsidiaries

(in millions of Korean won)	2016	2015
Opening equity attributable to owners of LG Display Co., Ltd.	12,192,952	11,431,412
Profit for the year	906,713	966,553
Other comprehensive income, net of tax	35,240	(26,105)
Dividends	(178,908)	(178,908)
Closing equity attributable to owners of LG Display Co., Ltd.	12,955,997	12,192,952
Group ownership(%)	37.9	37.9
The Group's share at the end of the reporting period	4,910,781	4,621,566
Unrealized loss	(72,971)	(59,197)
Carrying amount at the end of the reporting period	4,837,810	4,562,369

(f) The Group's share in the operating results of the individually insignificant associates and joint ventures for the years ended December 31, 2016 and 2015, is as follows:

	20	16	2015			
(in millions of Korean won)	Associates	Joint ventures	Associates	Joint ventures		
Profit(loss) for the year	(52,396)	14,407	(25,782)	11,067		
Other comprehensive income, net of tax	(474)	(9,412)	284	(3,968)		
Total comprehensive income(loss), net of tax	(52,870)	4,995	(25,498)	7,099		

(g) Accumulated unrecognized changes in equity due to discontinued use of the equity method for the years ended December 31, 2016 and 2015, are as follows:

	Decem	ber 31, 2016	Decem	ber 31, 2015
	Unrecognized	Unrecognized	Unrecognized	Unrecognized
<u>(in millions of Korean won)</u>	losses	accumulated losses	losses	accumulated losses
Hitachi-LG Data Storage Inc.(HLDS)	(21,243)	-	17,666	21,243

(h) Details of marketable investments in associates as of December 31, 2016 and 2015, are as follows:

	December 31, 2016					
	Туре	Shares held (Unit: shares)	Price per share (Unit: won)	Fair value <i>(in millions of</i>	Book amount <i>Korean won)</i>	
LG Display Co., Ltd.	Associate	135,625,000	31,450	4,265,406	4,837,810	
Korea Information Certificate Authority Inc.	Associate	2,289,708	5,660	12,960	5,167	

	December 31, 2015					
	Туре	Shares held (Unit: shares)	Price per share (Unit: won)	Fair value <i>(in millions of</i>	Book amount <i>Korean won)</i>	
LG Display Co., Ltd. Korea Information	Associate	135,625,000	24,550	3,329,594	4,562,369	
Certificate Authority Inc.	Associate	2,000,000	10,850	21,700	3,605	

14. Investment Properties

(a) Details of investment properties as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	Land	Buildings	Total
At December 31, 2016			
Acquisition cost	63,864	53,960	117,824
Accumulated depreciation	-	(20,793)	(20,793)
Net book amount	63,864	33,167	97,031
At December 31, 2015			
Acquisition cost	77,990	69,627	147,617
Accumulated depreciation	-	(26,346)	(26,346)
Net book amount	77,990	43,281	121,271

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

	2016					
(in millions of Korean won)	Land	Buildings	Total			
At January 1	77,990	43,281	121,271			
Transfer in(out) ¹	(8,906)	-	(8,906)			
Disposals	(5,220)	(8,730)	(13,950)			
Depreciation		(1,384)	(1,384)			
At December 31	63,864	33,167	97,031			

	2015				
(in millions of Korean won)	Land	Buildings	Total		
At January 1	1,085	1,614	2,699		
Transfer in(out) ¹	76,905	43,156	120,061		
Disposals	-	(750)	(750)		
Depreciation	-	(739)	(739)		
At December 31	77,990	43,281	121,271		

¹ Reclassified to assets held-for-sale from investment properties or transferred to investment properties from property, plant and equipment.

- (c) The fair value of investment property is valued by an independent professional appraiser with certified qualification or determined based on the evaluation reflecting official land value or recently available transaction price of similar properties, and it is classified as 'level 3' of the fair value hierarchy. The fair value of investment property as of December 31, 2016, is ₩100,411 million (2015: ₩123,748 million).
- (d) Rental income amounting to ₩3,841 million (2015: ₩1,514 million) and rental expenses amounting to ₩2,108 million (2015: ₩1,486 million) are recognized in the consolidated statements of profit or loss relating to the investment properties for the year ended December 31, 2016.
- (e) As of December 31, 2016, the Group assumes obligation for repairs and maintenance of investment property owned by the Group.

15. Borrowings

(a) The carrying amounts of borrowings as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Current		
Short-term borrowings	596,541	910,031
Current portion of long-term borrowings	422,944	382,060
Current portion of debentures	631,026	1,034,037
Subtotal	1,650,511	2,326,128

(in millions of Korean won)	December 31, 2016	December 31, 2015
Non-current		
Long-term borrowings	2,199,764	2,244,982
Debentures	4,808,736	4,256,140
Subtotal	7,008,500	6,501,122
Total	8,659,011	8,827,250

(b) Details of borrowings as at December 31, 2016 and 2015 are as follows:

i) Short-term borrowings consist of:

	Annual inte	erest rate at	Carrying amount		
(in millions of Korean won)	December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015	
General loans ¹					
HSBC and others	1.3 ~ 14.4%	1.0 ~ 14.8%	596,541	910,031	
Total			596,541	910,031	

¹ The Group entered into a cross-currency swap contract to hedge cash flow risk related to foreign exchange rate and floating interest rate of some portion of borrowings (Note 37).

ii) Long-term borrowings consist of:

		Annual interest	De	cember 31, 201	6
(in millions of Korean won)	Maturity date	rate at December 31, 2016(%)	Total	Current	Non-current
Local currency loans					
Kookmin Bank	2019.11.08	2.35	50,000	10,000	40,000
Kookmin Bank ¹	2027.01.28	3M CD+0.91	190,000	-	190,000
Kookmin Bank ¹	2029.04.30	3M CD+1.14	200,000	-	200,000
Nonghyup Bank ¹	2030.07.07	3M CD+1.05	190,000	-	190,000
Shinhan Bank	2017.02.16	4.60	190,000	190,000	-
Shinhan Bank	2017.02.27	3.63	20,000	20,000	-
Shinhan Bank	2017.09.15	1.75	168	168	-
Shinhan Bank	2018.06.04	2.69	20,000	-	20,000
Shinhan Bank	2020.04.16	3.11	1,667	500	1,167
Shinhan Bank	2021.08.30	2.38	50,000	-	50,000
Woori Bank ¹	2030.04.15	3M CD+0.82	390,000	-	390,000
KEB Hana Bank ¹	2024.01.03	3M CD+0.98	200,000	-	200,000
Korea Development Bank	2017.02.28	3.58	70,000	70,000	
Korea Development Bank	2017.02.28	3.76	30,000	30,000	
Korea Development Bank	2017.02.28	3.97	70,000	70,000	
Korea Development Bank	2018.05.28	3.76	50,000	-	50,000
Korea Development Bank	2019.05.27	2.81	30,000	-	30,000
Korea Development Bank	2023.12.19	2.65	120,000	-	120,000

		Annual interest	December 31, 2016		
(in millions of Korean won)	Maturity date	rate at December 31, 2016(%)	Total	Current	Non-current
Korea Development Bank	2025.09.09	3.00	200,000	-	200,000
The Export-Import Bank of Korea	2026.07.29	2.21	200,000	-	200,000
Foreign currency loans					
HSBC and others	2017.07.17 ~ 2021.07.12	2.36 ~ 12.48	350,873	32,276	318,597
Total			2,622,708	422,944	2,199,764

		Annual interest rate at	De	December 31, 2015		
(in millions of Korean won)	Maturity date	December 31, 2015(%)	Total	Current	Non-current	
Kookmin Bank ¹	2027.01.28	3M CD+0.91	190,000	-	190,000	
Kookmin Bank ¹	2029.04.30	3M CD+1.14	200,000	-	200,000	
Nonghyup Bank ¹	2030.07.07	3M CD+1.05	190,000	-	190,000	
Shinhan Bank	2016.05.22	2.75	17	17	-	
Shinhan Bank	2016.10.19	4.37	47,500	47,500	-	
Shinhan Bank	2017.02.16	4.60	190,000	-	190,000	
Shinhan Bank	2017.02.27	3.63	20,000	-	20,000	
Shinhan Bank	2017.09.15	1.75	392	224	168	
Shinhan Bank	2018.06.04	2.69	20,000	-	20,000	
Shinhan Bank	2020.04.16	3.11	2,167	500	1,667	
IBK Securities	2016.10.14	3.35	87,545	87,545	-	
Woori Bank ¹	2030.04.15	3M CD+0.82	390,000	-	390,000	
KEB Hana Bank	2016.03.28	1.97	165	165	-	
KEB Hana Bank ¹	2024.01.03	3M CD+0.98	200,000	-	200,000	
Korea Development Bank	2016.04.20	4.63	30,000	30,000	-	
Korea Development Bank	2016.07.27	3.81	50,000	50,000	-	
Korea Development Bank	2016.07.27	3.78	50,000	50,000	-	
Korea Development Bank	2016.07.27	3.71	30,000	30,000	-	
Korea Development Bank	2016.07.27	3.75	20,000	20,000	-	
Korea Development Bank	2017.02.28	3.58	70,000	-	70,000	
Korea Development Bank	2017.02.28	3.76	30,000	-	30,000	
Korea Development Bank	2017.02.28	3.97	70,000	-	70,000	
Korea Development Bank	2017.03.29	4.62	190,000	-	190,000	
Korea Development Bank	2018.05.28	3.76	50,000	-	50,000	
Korea Development Bank	2025.09.09	3.00	200,000	-	200,000	
Foreign currency loans						
HSBC and others	2016.03.31 ~ 2019.06.18	1.47 ~ 10.40	299,256	66,109	233,147	
Total		_	2,627,042	382,060	2,244,982	

¹ The Group entered into interest rate swap contracts to hedge cash flow risk related to floating interest rates fluctuation (Note 37).

iii) Debentures consist of:

			Annual interest rate	De	cember 31,	2016
(in millions of Korean won)	_	Maturity Date	at December 31, 2016(%)	Total	Current	Non-current
Fixed rate notes in local currency	Public, non-guaranteed bonds(30-2nd)	2017.02.09	4.90	50,000	50,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds(31-2nd)	2017.11.12	3.73	80,000	80,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds(33-1st)	2017.11.10	2.48	30,000	30,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds(33-2nd)	2019.11.10	2.98	70,000	-	70,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(34-1st)	2018.02.13	2.48	10,000	-	10,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(34-2nd)	2020.02.13	2.90	90,000	-	90,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(35-1st)	2018.11.26	2.26	40,000	-	40,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(35-2nd)	2020.11.26	2.54	60,000	-	60,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(36-1st)	2019.02.12	2.02	30,000	-	30,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(36-2nd)	2020.02.12	2.07	20,000	-	20,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(37-1st)	2019.04.19	1.90	80,000	-	80,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(37-2nd)	2021.04.19	2.21	70,000	-	70,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(38th)	2019.09.21	1.95	60,000	-	60,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(66-2nd)	2017.09.10	3.28	130,000	130,000	-
Fixed rate notes in local currency	Private, non-guaranteed bonds(67th)	2018.03.21	3.11	300,000	-	300,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(68-1st)	2020.05.23	3.29	100,000	-	100,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(68-2nd)	2020.05.24	3.29	20,000	-	20,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(68-3rd)	2023.05.22	3.68	50,000	-	50,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(68-4th)	2023.05.23	3.68	30,000	-	30,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(69-2nd)	2018.07.31	3.54	140,000	-	140,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(69-3rd)	2020.07.31	3.85	150,000	-	150,000
Floating rate notes in foreign currency ¹	Private, guaranteed bonds(70th)	2019.01.31	3ML+1.60	241,700	-	241,700
Fixed rate notes in local currency	Public, non-guaranteed bonds(71-1st)	2018.10.18	3.55	200,000	-	200,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(71-2nd)	2020.10.19	3.82	110,000	-	110,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(71-3rd)	2023.10.18	4.25	90,000	-	90,000
Floating rate notes in foreign currency ¹	Private, non-guaranteed bonds(72nd)	2017.06.19	3ML+1.30	241,700	241,700	-
Fixed rate notes in local currency	Public, non-guaranteed bonds(73-1st)	2017.01.24	3.16	100,000	100,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds(73-2nd)	2019.01.24	3.60	120,000	-	120,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(73-3rd)	2021.01.24	3.95	160,000	-	160,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(73-4th)	2024.01.24	4.44	120,000	-	120,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(74-1st)	2019.05.29	3.30	200,000	-	200,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(74-2nd)	2021.05.29	3.52	130,000	-	130,000

			Annual interest rate	De	cember 31,	2016
(in millions of Korean won)		Maturity Date	at December 31, 2016(%)	Total	Current	Non-current
Fixed rate notes in local currency	Public, non-guaranteed bonds(74-3rd)	2024.05.29	4.04	210,000	-	210,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(74-4th)	2029.05.29	4.44	60,000	-	60,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(75th)	2026.07.16	3.96	100,000	-	100,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(76-1st)	2028.11.17	3.79	40,000	-	40,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(76-2nd)	2028.11.18	3.79	60,000	-	60,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(77-1st)	2020.02.02	2.28	210,000	-	210,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(77-2nd)	2022.02.02	2.51	230,000	-	230,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(77-3rd)	2025.02.02	2.97	210,000	-	210,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(77-4th)	2030.02.02	3.45	100,000	-	100,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(78-1st)	2019.02.24	1.88	110,000	-	110,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(78-2nd)	2021.02.24	2.14	200,000	-	200,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(78-3rd)	2023.02.24	2.45	140,000	-	140,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(79-1st)	2019.09.06	1.48	90,000	-	90,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(79-2nd)	2021.09.06	1.75	90,000	-	90,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(79-3rd)	2023.09.06	2.08	130,000	-	130,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(79-4th)	2026.09.06	2.67	150,000	-	150,000
Less: discount on debentures				(13,638)	(674)	(12,964)
Total	-			5,439,762	631,026	4,808,736

			Annual interest rate	De	cember 31,	2015
(in millions of Korean won)	_	Maturity date	at December 31, 2015(%)	Total	Current	Non-current
Fixed rate notes in local currency	Public, non-guaranteed bonds(30-2 nd)	2017.02.09	4.90	50,000	-	50,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(31-1st)	2016.11.12	3.61	70,000	70,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds(31-2 nd)	2017.11.12	3.73	80,000	-	80,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(33-1st)	2017.11.10	2.48	30,000	-	30,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(33-2nd)	2019.11.10	2.98	70,000	-	70,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(34-1st)	2018.02.13	2.48	10,000	-	10,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(34-2nd)	2020.02.13	2.90	90,000	-	90,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(35-1st)	2018.02.13	2.26	40,000	-	40,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(35-2nd)	2020.02.13	2.54	60,000	-	60,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (58-2nd)	2016.02.16	4.91	60,000	60,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds (60th)	2016.05.20	4.41	190,000	190,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds (61st)	2016.06.29	4.38	190,000	190,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds (62-2nd)	2016.08.05	4.34	80,000	80,000	-
Fixed rate notes in local currency	Public, non-guaranteed bonds (64th)	2016.09.30	4.32	190,000	190,000	-
Fixed rate notes in foreign currency ¹	Public, non-guaranteed bonds (65th)	2016.12.02	2.00	254,859	254,859	-
Fixed rate notes in local currency	Public, non-guaranteed bonds (66-2 nd)	2017.09.10	3.28	130,000	-	130,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(67th)	2018.03.21	3.11	300,000	-	300,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(68-1 st)	2020.05.23	3.29	100,000	-	100,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(68-2 nd)	2020.05.24	3.29	20,000	-	20,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(68-3 rd)	2023.05.22	3.68	50,000	-	50,000
Fixed rate notes in local currency	Private, non-guaranteed bonds(68-4 th)	2023.05.23	3.68	30,000	-	30,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(69-2 nd)	2018.07.31	3.54	140,000	-	140,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(69-3rd)	2020.07.31	3.85	150,000	-	150,000
Floating rate notes in foreign currency ¹	Private, guaranteed bonds(70th)	2019.01.31	3ML+1.60	234,400	-	234,400
Fixed rate notes in local currency	Public, non-guaranteed bonds(71-1 st)	2018.10.18	3.55	200,000	-	200,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(71-2 nd)	2020.10.19	3.82	110,000	-	110,000
Fixed rate notes in local currency	Public, non-guaranteed bonds(71-3rd)	2023.10.18	4.25	90,000	-	90,000
Floating rate notes in foreign currency ¹	Private, non-guaranteed bonds(72 nd)	2017.06.19	3ML+1.30	234,400	-	234,400
Fixed rate notes in local currency	Public, non-guaranteed bonds (73-1st)	2017.01.24	3.16	100,000	-	100,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (73-2 nd)	2019.01.24	3.60	120,000	-	120,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (73-3rd)	2021.01.24	3.95	160,000	-	160,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (73-4th)	2024.01.24	4.44	120,000	-	120,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (74-1 st)	2019.05.29	3.30	200,000	-	200,000

			Annual interest rate	De	cember 31,	2015
(in millions of Korean won)	_	Maturity date	at December 31, 2015(%)	Total	Current	Non-current
Fixed rate notes in local currency	Public, non-guaranteed bonds (74-2 nd)	2021.05.29	3.52	130,000	-	130,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (74-3rd)	2024.05.29	4.04	210,000	-	210,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (74-4 th)	2029.05.29	4.44	60,000	-	60,000
Fixed rate notes in local currency	Private, non-guaranteed bonds (75 th)	2026.07.16	3.96	100,000	-	100,000
Fixed rate notes in local currency	Private, non-guaranteed bonds (76-1st)	2028.11.17	3.79	40,000	-	40,000
Fixed rate notes in local currency	Private, non-guaranteed bonds (76-2 nd)	2028.11.18	3.79	60,000	-	60,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (77-1 st)	2020.02.02	2.28	210,000	-	210,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (77-2 nd)	2022.02.02	2.51	230,000	-	230,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (77-3rd)	2025.02.02	2.97	210,000	-	210,000
Fixed rate notes in local currency	Public, non-guaranteed bonds (77-4 th)	2030.02.02	3.45	100,000	-	100,000
Less: discount on debentures				(13,482)	(822)	(12,660)
Total	•			5,290,177	1,034,037	4,256,140

¹ The Group entered into cross-currency swap contract to hedge cash flow risk related to floating interest rate and foreign exchange rate of the debentures (Note 37).

The principal and interests of private bonds (70th) are guaranteed by Shinhan Bank (Note 34).

16. Other Payables

Details of other payables as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015	
Current			
Non-trade payables	2,488,866	2,087,735	
Accrued expenses	690,169	737,883	
Dividends payable	246	609	
Leasehold deposits received	17,454	13,990	
Subtotal	3,196,735	2,840,217	
Non-current			
Non-trade payables	2,294	5,652	
Leasehold deposits received	5,477	7,866	
Subtotal	7,771	13,518	
Total	3,204,506	2,853,735	

17. Current Income Tax and Deferred Income Tax

Income tax expense

(a) Details of income tax expense(benefit) for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
Current income taxes		
Current tax on profits for the year	530,875	361,132
Adjustments in respect of prior years	56,413	8,507
Deferred income taxes		
Changes in temporary differences	(79,047)	(35,397)
Changes in tax credits	20,215	107,918
Changes in tax losses	66,946	(102,729)
Income tax expense(benefit)	595,402	339,431
From continuing operations	595,402	340,154
From discontinued operations	<u> </u>	(723)

(b) The reconciliation between profit before income tax and income tax expense for the years ended December 31, 2016 and 2015, is as follows:

(in millions of Korean won)	2016	2015
Profit(loss) before income tax:		
From continuing operations	721,717	593,125
From discontinued operations	<u> </u>	(4,551)
	721,717	588,574
Tax expense based on applicable tax rate ¹	232,190	158,035
Income not subject to tax	(48,503)	(36,513)
Expenses not deductible for tax purposes	75,651	31,823
Recognition of deferred tax asset on tax credits	(249,388)	(69,861)
Adjustments in respect of prior years	56,413	8,507
Changes in unrecognized deferred tax assets	465,447	240,888
Tax effect on investment in subsidiaries and associates	64,015	6,911
Change in tax rates	(423)	(359)
Income tax expense(benefit)	595,402	339,431
From continuing operations	595,402	340,154
From discontinued operations	<u> </u>	(723)
Effective tax rate	82.5%	57.7%

¹ The applicable tax rate, calculated using the weighted average statutory tax rates applicable to each entity within the Group to the profit before tax of the Group is 32.2% (2015: 26.9%) for the year ended December 31, 2016. The applicable tax rate has increased due to changes in the proportions of each entity's profit (loss) before income tax.

Deferred income tax

(a) Deferred tax assets and deferred tax liabilities after offsetting as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Deferred tax assets:		
Deferred tax asset to be recovered within 12 months	1,070,390	1,004,154
Deferred tax asset to be recovered after more than 12 months	1,654,323	1,699,051
Deferred tax assets before offsetting	2,724,713	2,703,205
Deferred tax liabilities:		
Deferred tax liability to be settled within 12 months	44,019	37,132
Deferred tax liability to be settled after more than 12 months	1,135,686	1,034,077
Deferred tax liabilities before offsetting	1,179,705	1,071,209
Deferred tax assets after offsetting	1,554,594	1,637,796
Deferred tax liabilities after offsetting	9,586	5,800

(b) Changes in deferred income tax assets and liabilities for the years ended December 31, 2016 and 2015, are as follows:

			2016		
(in millions of Korean won)	At January 1	Charged (credited) to the statements of profit or loss	Charged(credited) to other comprehensive income	Exchange differences	At December 31
Changes in temporary differences					
Investments in subsidiaries	(309,625)	(5,379)	216	-	(314,788)
Property, plant and equipment	(49,496)	12,603	-	(929)	(37,822)
Accrued expenses	497,731	(23,591)	-	(842)	473,298
Provisions	197,883	5,509	-	995	204,387
Other	393,806	89,905	(56,491)	(20,083)	407,137
Subtotal	730,299	79,047	(56,275)	(20,859)	732,212
Tax credits carryforwards	586,766	(20,215)	-	-	566,551
Tax loss carryforwards	314,931	(66,946)	-	(1,740)	246,245
Deferred tax assets(liabilities)	1,631,996	(8,114)	(56,275)	(22,599)	1,545,008

	2015							
(in millions of Korean won)	At January 1	Charged (credited) to the statements of profit or loss	Charged(credited) to other comprehensive income	Exchange differences	At December 31			
Changes in temporary differences								
Investments in subsidiaries	(306,306)	584	(3,903)	-	(309,625)			
Property, plant and equipment	(84,002)	34,839	-	(333)	(49,496)			
Accrued expenses	486,210	9,269	-	2,252	497,731			
Provisions	194,405	2,318	-	1,160	197,883			
Other	369,790	(11,613)	39,470	(3,841)	393,806			
Subtotal	660,097	35,397	35,567	(762)	730,299			
Tax credits carryforwards	694,684	(107,918)	-	-	586,766			
Tax loss carryforwards	212,602	102,729	-	(400)	314,931			
Deferred tax assets(liabilities)	1,567,383	30,208	35,567	(1,162)	1,631,996			

(c) Tax effects directly recognized in other comprehensive income directly for the years ended December 31, 2016 and 2015, are as follows:

		2016		2015			
(in millions of Korean won)	Before tax	Tax effects	After tax	Before tax	Tax effects	After tax	
Remeasurements of net defined benefit liabilities	239,901	(57,879)	182,022	(128,942)	33,588	(95,354)	
Cash flow hedge	(4,216)	1,270	(2,946)	(26,509)	6,661	(19,848)	
Available-for-sale financial assets Exchange differences on translation of	(495)	118	(377)	3,205	(779)	2,426	
foreign operations	174,409	216	174,625	(22,475)	(3,903)	(26,378)	
Total	409,599	(56,275)	353,324	(174,721)	35,567	(139,154)	
Exchange differences on translation of foreign operations	174,409	216	174,625	(22,475)	(3,903)	(26,	

(d) Details of deductible (taxable) temporary differences, tax credits and tax losses carryforward unrecognized as deferred tax assets (liabilities) as of December 31, 2016, are as follows:

(in millions of Korean won)	2016	Remark
Taxable temporary difference (investment in subsidiary)	(4,617,648)	Planned permanent reinvestment of undistributed profit
Deductible temporary difference (investment in subsidiary)	1,786,481	Unlikely to reverse(disposed of) in the foreseeable future
Tax credits carryforwards	615,477	Uncertainty of future taxable profit
Tax losses carryforwards	347,851	Uncertainty of future taxable profit

(e) Expirations of unrecognized tax credits and tax losses carryforward as of December 31, 2016, are as follows:

	Less than					
(in millions of Korean won)	1 year	2 years	3 years	Over 3 years		
Tax credits carryforwards	225,342	167,349	32,112	190,674		
Tax losses carryforwards	69,821	10,526	21,706	245,798		

18. Post-employment Benefits

Defined Benefit Plan

(a) The amounts of net defined benefit liabilities as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Present value of funded obligations	2,755,266	2,705,167
Present value of unfunded obligations	33,165	30,927
Subtotal	2,788,431	2,736,094
Fair value of plan assets	(2,277,909)	(1,948,484)
Net defined benefit liabilities ¹	510,522	787,610

¹Net defined benefit assets are included.

(b) The amounts recognized in the consolidated statements of profit or loss for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015	
Current service cost	379,451	356,348	
Past service cost	(2,074)	(512)	
Net interest cost	21,860	25,486	
Operating management cost	2,275	1,806	
Total	401,512	383,128	

(c) Line items in which expenses are included for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015	
Continuing operations:			
Manufacturing costs	202,949	190,715	
Selling and marketing expenses	61,596	66,075	
Administrative expenses	22,825	29,411	
Research and development expenses	106,007	87,379	
Service costs	8,135	9,548	
Subtotal	401,512	383,128	
Discontinued operations	-	-	
Total	401,512	383,128	

(d) Changes in the present value of defined benefit obligations for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
At January 1	2,736,094	2,341,633
Current service cost	379,451	356,348
Past service cost	(2,074)	(512)
Interest expense	72,397	71,870
Remeasurements for:		
 Actuarial loss arising from changes in demographic assumptions 	12,562	25,896
 Actuarial loss(gain) arising from changes in financial assumptions 	(259,479)	114,277
 Actuarial gain arising from experience adjustments 	(4,610)	(18,919)
Increase due to business combination	-	142
Decrease due to transfer of business	-	(16,584)
Benefits paid	(146,292)	(138,093)
Others	382	36
At December 31	2,788,431	2,736,094

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

(in millions of Korean won)	2016	2015	
At January 1	1,948,484	1,543,183	
Interest income	50,537	46,384	
Remeasurements of plan assets	(11,626)	(7,688)	
Employer contributions	394,661	468,439	
Increase due to business combination	-	133	
Decrease due to transfer of business	-	(12,304)	
Benefits paid	(101,936)	(87,954)	
Operating management cost	(2,275)	(1,806)	
Others	64	97	
At December 31	2,277,909	1,948,484	

(f) The principal actuarial assumptions used as of December 31, 2016 and 2015, are as follows:

	December 31, 2016	December 31, 2015
Weighted average of discount rate of the Group	2.8%	2.7%
Weighted average of expected salary growth rate of the Group	5.1%	6.1%

As of December 31, 2016, the discount rates applied to the Parent Company and subsidiaries are between 0.4%~8.4% (2015: 0.6%~9.4%), and the expected salary growth rates are between 1.0%~11.0% (2015: 1.0%~11.0%).

(g) The sensitivity analysis of the defined benefit obligation to changes in principal assumptions as of December 31, 2016, is as follows:

(in millions of Korean won)	1%p increase	1%p decrease
Discount rate	(237,517)	275,237
Expected salary growth rate	260,061	(239,494)

The above sensitivity analysis are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. The sensitivity of the defined benefit obligation to changes in principal actuarial assumptions is calculated using the projected unit credit method, the same method applied when calculating the defined benefit obligations.

(h) Plan assets consist of:

	Decem	ber 31, 2016	December 31, 2015		
(in millions of Korean won)	Amount	Composition(%)	Amount	Composition(%)	
Securities combined with derivatives (guaranteed)	1,590,338	69.8	1,335,745	68.6	
Time deposits and others	687,571	30.2	612,739	31.4	
Total	2,277,909	100.0	1,948,484	100.0	

(i) The weighted average duration of the defined benefit obligations is 10 years. Expected maturity analysis of undiscounted pension benefits as of December 31, 2016, is as follows:

(in millions of Korean won)	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Between 5 and 10 years	Over 10 years	Total
Pension benefits	147,514	182,120	592,429	845,514	1,943,670	3,711,247

The Group evaluates the fund contribution level annually and if there is a shortfall in the funds the Group has a policy to finance the funds. Expected contributions to post-employment benefit plans for the year ending December 31, 2017, are $\$ 402,664 million.

Defined Contribution Plan

Recognized expense related to the defined contribution plan for the year ended December 31, 2016, amounts to \10,386 million (2015: \11,544 million).

19. Provisions

(a) Changes in provisions for the years ended December 31, 2016 and 2015, are as follows:

	2016					
(in millions of Korean won)	Warranty	Sales returns	Restoration	Litigation and others	Total	
At January 1	569,101	57,063	16,163	1,007,963	1,650,290	
Additions	1,575,549	246,507	11,768	166,763	2,000,587	
Utilization	(1,387,593)	(264,309)	(2,453)	(204,080)	(1,858,435)	
Exchange differences	(548)	(190)	(493)	8,054	6,823	
At December 31	756,509	39,071	24,985	978,700	1,799,265	
Current	710,950	39,071	4,980	15,966	770,967	
Non-current	45,559		20,005	962,734	1,028,298	

	2015					
(in millions of Korean won)	Warranty	Total				
At January 1	663,239	69,941	13,409	969,115	1,715,704	
Additions	818,856	237,181	5,719	143,822	1,205,578	
Utilization	(894,841)	(247,696)	(2,177)	(87,237)	(1,231,951)	
Exchange differences	(18,153)	(2,363)	(788)	(17,737)	(39,041)	
At December 31	569,101	57,063	16,163	1,007,963	1,650,290	
Current	515,847	57,063	232	2,802	575,944	
Non-current	53,254		15,931	1,005,161	1,074,346	

(b) Greenhouse Gas Emission Liabilities

As of December 31, 2016, emission rights received free of charge for each reporting period and greenhouse gas emission estimated by management, are as follows:

(in tons)	2016	2017
Emission rights received free of charge	873,408	856,019

In 2016, there is no emission right that the Group additionally purchased from the market and there is no recognized emission liability as greenhouse gas emission estimated by management is 844,132 tons.

20. Other Liabilities

Other liabilities as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Current		
Advances from customers	428,232	288,670
Unearned income	50,339	42,319
Withholding	419,881	418,009
Accrued expenses	2,385,952	2,102,150
Other	8	1,953
Subtotal	3,284,412	2,853,101
Non-current		
Unearned income	17,878	7,554
Accrued expenses	95,941	96,058
Other	1,711	1,712
Subtotal	115,530	105,324
Total	3,399,942	2,958,425

21. Paid-in Capital

(a) As of December 31, 2016 and 2015, the number of shares authorized is 600 million.

		December 31, 2016		Decembe	er 31, 2015
	Par value per share	Number of shares issued	Amount (in millions of Korean won)	Number of shares issued	Amount (in millions of Korean won)
Ordinary shares	5,000	163,647,814	818,239	163,647,814	818,239
Preferred shares	5,000	17,185,992	85,930	17,185,992	85,930
Total		180,833,806	904,169	180,833,806	904,169

The preferred shareholders have no voting rights and are entitled to preferred dividends at a rate of one percentage point over that of ordinary shares. This preferred dividend rate is not

applicable to stock dividends. In addition, the preferred shareholders have same rights on the remaining assets as ordinary shareholders. Repayment and conversion are not applicable to preferred shares.

(b) Share premium balance as of December 31, 2016, is ₩3,088,179 million. The share premium of ₩1,876,153 million was recognized, which is ₩2,815,707 million of the carrying amount of net assets acquired from the entity split-off back on April 1, 2002, less the Parent Company's capital of ₩783,961 million and less the Parent Company's capital adjustment of ₩155,593 million. In addition, the amount of ₩331,766 million paid in excess of par value due to issuance of ordinary shares (merger with LG IBMPC Co., Ltd.) and the exercise of conversion right and warrants in 2005 and 2006 are included. The excess in paid-in capital amounting to ₩880,260 million over the par value was recognized as the share premium due to the issuance of ordinary shares in 2011.

22. Retained Earnings and Dividends

(a) Retained earnings as of December 31, 2016 and 2015, consist of:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Legal reserve ¹	167,766	160,478
Discretionary reserve	4,805,354	5,317,480
Unappropriated retained earnings	4,260,296	3,538,588
Total	9,233,416	9,016,546

¹ The Commercial Code of the Republic of Korea requires the Parent Company to appropriate, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued share capital. The reserve is not available for the payment of cash dividends, but may be transferred to share capital or used to reduce accumulated deficit.

(b) Dividends of the Parent Company

Details of dividends per share and a total dividend in respect of the year ended December 31, 2016, which is to be proposed at the annual general meeting on March 17, 2017, are as follows. These consolidated financial statements do not reflect this dividend payable.

(Unit: shares)	2016		201	5
	Ordinary shares	Preferred shares	Ordinary shares	Preferred shares
Outstanding shares	163,647,814	17,185,992	163,647,814	17,185,992
Treasury shares	(763,171)	(4,690)	(763,171)	(4,690)
Numbers of shares for dividend	162,884,643	17,181,302	162,884,643	17,181,302
Par value (in Korean won)	5,000	5,000	5,000	5,000
Dividend rate	8%	9%	8%	9%
Dividends per share (in Korean won)	400	450	400	450
Total dividend amount (in millions of Korean won)	65,154	7,731	65,154	7,731
Dividend payout ratio ¹ (Dividends/Net income)	-	-	-	-

Stock price ² (in Korean won)	49,810	24,390	52,675	28,950
Dividend yield ratio (Dividend per share/Market price)	0.80%	1.85%	0.76%	1.55%

¹ Dividend payout ratio is not calculated due to the net loss for the year of the Parent Company.

² Average of prices in the stock market for one week preceding the two business days before the record date of the shareholders' list for the general meeting of shareholders related to above dividends.

23. Accumulated Other Comprehensive Income

Accumulated other comprehensive income as of December 31, 2016 and 2015, consist of:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Accumulated other comprehensive loss of associates and joint ventures	(97,343)	(57,332)
Cash flow hedge	(55,871)	(52,925)
Available-for-sale financial assets	10,564	10,941
Exchange difference on translation of foreign operations	(886,312)	(1,072,663)
Total	(1,028,962)	(1,171,979)

24. Other Components of Equity

Other components of equity as of December 31, 2016 and 2015, consist of:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Treasury shares ¹	(44,893)	(44,893)
Consideration for conversion rights	9,891	9,891
Gain on disposal of treasury shares	2,183	2,183
Capital transactions within the Group	(176,889)	(177,524)
Total	(209,708)	(210,343)

¹ As of December 31, 2016, the Parent Company has treasury shares consisting of 763,171 ordinary shares (December 31, 2015: 763,171 shares) and 4,690 preferred shares (December 31, 2015: 4,690 shares) at the end of the reporting period. The Parent Company intends to either grant these treasury shares to employees and directors as compensation, or to sell them in the future.

25. Net Sales

Details of net sales for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
Continuing operations:		
Sales of goods	54,586,597	55,684,592
Rendering of services	541,663	455,293
Royalty income	238,773	369,123
Subtotal	55,367,033	56,509,008
Discontinued operations	-	27,884
Total	55,367,033	56,536,892

26. Expenses by Nature

Expenses that are recorded by nature for the years ended December 31, 2016 and 2015, consist of:

(in millions of Korean won)	2016	2015
Continuing operations:		
Changes in finished goods and work-in-process	(162,369)	484,862
Raw materials and merchandise used	33,936,093	35,284,070
Employee benefit expense	6,371,390	6,210,229
Depreciation and amortization	1,721,684	1,901,626
Advertising expense	1,322,215	1,088,882
Promotion expense	761,576	698,107
Transportation expense	1,377,625	1,433,815
Commission expense	2,811,245	2,771,935
Other expenses	5,889,811	5,443,191
Subtotal ¹	54,029,270	55,316,717
Discontinued operations	-	32,394
Total	54,029,270	55,349,111

¹ Cost of sales, selling and marketing expenses, administrative expenses, research and development expenses and service costs are included.

27. General Operating Expenses (Selling and Marketing Expenses, Administrative Expenses, Research and Development Expenses, and Service Costs)

Details of general operating expenses for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
Continuing operations:		
Salaries	2,749,514	2,662,886
Post-employment benefits	243,576	212,408
Employee benefits	597,014	596,735
Freight expense	1,362,895	1,420,263
Rental expense	448,965	434,497
Commission expense	2,032,347	2,030,715
Depreciation	249,271	275,136
Amortization	197,896	201,668
Taxes and dues	138,542	149,017
Advertising expense	1,322,215	1,088,882
Promotional expense	761,576	698,107
R&D expense	354,408	402,183
Service costs	1,311,115	707,473
Bad debts expense	(59,186)	15,111
Other	688,829	786,573
Subtotal	12,398,977	11,681,654
Discontinued operations	-	5,417
Total	12,398,977	11,687,071

28. Financial Income

Financial income for the years ended December 31, 2016 and 2015, consists of:

2016	2015
94,704	93,412
392,139	445,432
3,341	3,636
409	106
490,593	542,586
-	-
490,593	542,586
	392,139 3,341 409 490,593

29. Financial Expenses

Financial expenses for the years ended December 31, 2016 and 2015, consist of:

(in millions of Korean won)	2016	2015
Continuing operations:		
Interest expense	418,312	452,192
Exchange differences	445,479	420,208
Loss on derivatives	2,767	2,030
Loss on disposal of trade receivables	15,447	22,370
Other	2,046	6,284
Subtotal	884,051	903,084
Discontinued operations	-	-
Total	884,051	903,084

30. Other Non-operating Income

Other non-operating income for the years ended December 31, 2016 and 2015, consists of:

(in millions of Korean won)	2016	2015
Continuing operations:		
Dividend income	286	815
Exchange differences	1,797,247	1,655,962
Gain on derivatives	20,472	78,376
Gain on disposal of property, plant and equipment	20,115	19,619
Gain on disposal of intangible assets	2	273
Gain on disposal of investment property	7,903	-
Gain on disposal of available-for-sale financial assets	368	8,217

(in millions of Korean won)	2016	2015
Gain on disposal of investments in associates and joint ventures	-	21,685
Gain on transfer of business	-	37,441
Other	48,191	59,244
Subtotal	1,894,584	1,881,632
Discontinued operations		2,059
Total	1,894,584	1,883,691

31. Other Non-operating Expenses

Other non-operating expenses for the years ended December 31, 2016 and 2015, consist of:

(in millions of Korean won)	2016	2015
Continuing operations:		
Exchange differences	2,003,743	2,103,721
Loss on derivatives	68,693	29,862
Loss on disposal of property, plant and equipment	33,241	33,369
Impairment loss on disposal of property, plant and equipment	75,115	61,769
Loss on disposal of intangible assets	11,503	27,131
Impairment loss on disposal of available-for-sale financial assets	9,897	3,776
Other	183,718	220,182
Subtotal	2,385,910	2,479,810
Discontinued operations	<u> </u>	2,100
Total	2,385,910	2,481,910

32. Earnings per Share

The Group has no potential dilutive ordinary shares. Accordingly, basic earnings(loss) per share is identical to diluted earnings(loss) per share.

(a) Basic earnings(loss) per ordinary share for the years ended December 31, 2016 and 2015, is as follows:

	2016	2015
Profit (loss) attributable to ordinary shares ¹ (in millions of Korean won)	68,767	111,748
Continuing operations	68,767	115,216
Discontinued operations	-	(3,468)
Weighted average number of ordinary shares outstanding (unit: shares) ²	162,884,643	162,884,643
Basic earnings (loss) per ordinary share (in Korean won)	422	686
Continuing operations	422	707
Discontinued operations	-	(21)

(b) Basic earnings(loss) per preferred share for the years ended December 31, 2016 and 2015, is as follows:

	2016	2015
Profit (loss) attributable to preferred shares ¹ (in millions of Korean won)	8,112	12,646
Continuing operations	8,112	13,012
Discontinued operations	-	(366)
Weighted average number of preferred shares outstanding(unit: shares) ²	17,181,302	17,181,302
Basic earnings (loss) per preferred share (in Korean won)	472	736
Continuing operations	472	757
Discontinued operations	-	(21)

¹ Profit attributable to ordinary and preferred shares is as follows:

(in millions of Korean won)	2016	2015
Continuing operations:		
Profit for the year (A)	76,879	128,228
Ordinary share dividends (B)	65,154	65,154
Preferred share dividends (C)	7,731	7,731
Undistributed profit(D=A-B-C)	3,994	55,343
Undistributed profit available for ordinary shares (E)	3,613	50,062
Undistributed profit available for preferred shares (F)	381	5,281
Profit attributable to ordinary shares (G=B+E)	68,767	115,216
Profit attributable to preferred shares (H=C+F)	8,112	13,012
Discontinued operations:		
Loss for the year (I)	-	(3,834)

(in millions of Korean won)	2016	2015
Ordinary share dividends (J)	-	-
Preferred share dividends (K)	-	-
Undistributed loss (L=I-J-K)	-	(3,834)
Undistributed loss available for ordinary shares (M)	-	(3,468)
Undistributed loss available for preferred shares (N)	-	(366)
Loss attributable to ordinary shares (O=J+M)	-	(3,468)
Loss attributable to preferred shares (P=K+N)	-	(366)

²Weighted average numbers of shares are calculated as follows:

	2016	2015
Ordinary shares issued	163,647,814	163,647,814
Ordinary treasury shares	(763,171)	(763,171)
Ordinary shares outstanding	162,884,643	162,884,643
Weighted average number of ordinary shares outstanding	162,884,643	162,884,643
Preferred shares issued	17,185,992	17,185,992
Preferred treasury shares	(4,690)	(4,690)
Preferred shares outstanding	17,181,302	17,181,302
Weighted average number of preferred shares outstanding	17,181,302	17,181,302

33. Cash Flow Information

Cash flows from operating activities are prepared using the indirect method. Details of cash generated from operations for the years ended December 31, 2016 and 2015, are as follows:

(a) Cash generated from operations

(in millions of Korean won)	2016	2015
Profit for the year	126,315	249,143
Adjustments:		
Interest expense, net	323,608	358,780
Exchange differences, net	290,362	105,921
Loss(gain) on derivatives, net	47,647	(50,120)
Depreciation	1,322,108	1,514,019
Amortization	420,874	418,702
Loss on disposal of property, plant and equipment, intangible assets, net	24,627	40,608
Provisions for severance benefits	401,512	383,128
Provisions	2,000,587	1,205,578
Income tax expense	595,402	340,154
Gain from equity method	(268,738)	(359,510)
Other	385,524	306,248
Profit from discontinued operations	-	(2,094)
	5,543,513	4,261,414
Changes in operating assets and liabilities		
Decrease in trade receivables	363,458	313,632
Decrease (increase) in loans and other receivables	112,724	(21,068)
Decrease (increase) in inventories	(527,665)	461,595
Decrease (increase) in other assets	(241,414)	10,006
Increase (decrease) in trade payables	423,512	(405,586)
Increase in other payables	65,795	37,198
Decrease in provisions	(1,858,435)	(1,188,774)
Increase in other liabilities	447,194	185,134
Payment of defined benefit liability	(44,356)	(50,139)
Deposit in plan assets, net	(431,297)	(505,329)
	(1,690,484)	(1,163,331)
Cash generated from operations	3,979,344	3,347,226

(b) Significant non-cash transactions:

(in millions of Korean won)	2016	2015
Reclassification of construction-in-progress to property, plant and equipment	932,966	1,243,849
Reclassification of construction-in-progress to intangible assets	223,435	291,488
Reclassification of other assets to intangible assets	114,043	99,287
Reclassification of current portion of borrowings and debentures	1,258,665	1,418,380
Other payables to acquire property, plant and equipment	473,778	206,763
Other payables to acquire intangible assets	15,527	44,528

- (c) Assets and liabilities arising from the transfer of business
 - Transfer of Display Driver-IC design business
 - i) On July 1, 2015, the assets and workforce of Display Driver-IC design business were transferred to Silicon Works Co., Ltd.
 - ii) Total consideration received, and the assets and liabilities of the transferred business are as follows:

(in millions of Korean won)	Amount
Total consideration	
Cash and cash equivalents	22,010
Assets of the transferred business:	
Trade receivables and other receivables	8,199
Inventories	12,276
Property, plant and equipment and intangible assets	670
Other assets	24
Liabilities of the transferred business:	
Trade payables and other payables	11,760
Other liabilities	7
Net defined benefit liabilities	437

- Transfer of LG INNOTEK (FUZHOU) CO., LTD.
- i) The Group transferred LG INNOTEK (FUZHOU) CO.,LTD., a subsidiary of the Group, to Yinoute Electronics HK on October 26, 2015.
- ii) Total consideration received, and the assets and liabilities arising from the transfer of business are as follows:

(in millions of Korean won)	Amount
Total consideration	
Cash and cash equivalents	5,158
Other receivables	6,457
Assets of the transferred business:	
Property, plant and equipment and other assets	11,568

- Transfer of Hi Logistics Co., Ltd. and its subsidiaries

- i) The Group transferred Hi Logistics Co., Ltd. and its subsidiaries, leading logistics management services business, to Pantos Logistics Co., Ltd. on November 2, 2015.
- ii) Total consideration received, and the assets and liabilities arising from the transfer of business are as follows:

(in millions of Korean won)

Total consideration	
Cash and cash equivalents	105,400
Assets of the transferred business:	
Cash and cash equivalents	19,701
Trade receivables and other receivables	50,993
Inventories	67
Property, plant and equipment and intangible assets	32,970
Other assets	3,475
Liabilities of the transferred business:	
Trade payables and other payables	10,741
Net defined benefit liabilities and other liabilities	18,349
Net defined benefit habilities and other habilities	

Costs of disposal related to transfer of business amounting to \forall 527 million was recognized as an expense as incurred.

34. Contingencies

(a) At the end of the reporting period, borrowings are collateralized by property, plant and equipment (land, buildings, machinery and others) (Note 11).

(b) At the end of the reporting period, the Parent Company and domestic subsidiaries are provided with performance guarantees of ₩221,261 million (December 31, 2015: ₩155,194 million) from Seoul Guarantee Insurance and others relating to the performance guarantees. The Parent Company is provided with guarantee of principal US\$ 200 million (December 31, 2015: US\$ 200 million) and interests from Shinhan Bank for the guaranteed private placement bonds.

(c) At the end of the reporting period, there is no financial guarantee provided by the Parent Company to external parties other than subsidiaries (December 31, 2015: US\$ 24 million). The Parent Company is providing KEB Hana Bank with a payment guarantee for customers of up to #46,000 million (December 31, 2015: #66,000 million). Also, domestic subsidiaries provide joint performance guarantee amounting to # 61,499 million (December 31, 2015: nil).

(d) At the end of the reporting period, the Group is obliged to collect a portion of the waste generated from products sold in India in the past to comply with the E-Waste (Management) Rule of India. This may affect certain items in general operating expenses or provisions. However, the potential impact on the consolidated financial statements may materially vary depending on the approval of the Indian Government on the waste collection plan submitted by the Group or subsequent guidance of other relevant legislations.

(e) In December 2012, the European Commission imposed a penalty on the Parent Company for anti-competitive activities among CRT (Cathode Ray Tube) manufacturers as a result of an investigation. The Parent Company recognized such penalty amounting to EUR 491,567 thousand as expected loss. However, the Parent Company appealed against the decision of the European Commission. The ultimate amount of loss resulting from the investigation may differ from the amount of penalty imposed and could be material. The Parent Company is provided with a performance guarantee of EUR 535,808 thousand from HSBC and others for the above.

In addition, the Parent Company is under investigation and has been named as a defendant in class actions in the United States, Europe and others, in connection with the alleged anticompetitive activities among CRT manufacturers. There are also a number of other legal actions, disputes, and investigations arising from the normal course of business that remain pending at the end of the reporting period. The ultimate effect of those lawsuits on the financial position of the Group as of the statement of financial position date cannot be presently determined.

At the end of the reporting period, LG Display Co., Ltd., an associate of the Group, has been named as a defendant in a case related to the infringement of patents. In addition, LG Display Co., Ltd. is currently under the investigation and civil suit for anti-competitive activities. The outcome of the case may affect the gain or loss from the equity method valuation. The Group does not have individual responsibility in the case and the investigation above.

At the end of the reporting period, the European Commission imposed a penalty amounting to EUR 37,121 thousand on Hitachi-LG Data Storage Inc. (HLDS), an associate of the Group, for anti-competitive activities among Optical Disk Drive (ODD) manufactures as a result of an investigation. However, HLDS appealed against the decision of the European Commission. The outcome of the investigation may affect gain or loss from equity method valuation. The Group does not have individual responsibility in the case above.

There are pending lawsuits other than above. However, management does not expect the outcome of the litigations will have a material effect on the Group's financial position.

35. Commitments

(a) At the end of the reporting period, the Parent Company has overdraft facility agreements with various banks, including Shinhan Bank, with a limit of #165,500 million (December 31, 2015: #175,500 million).

In addition, LG Innotek Co., Ltd. has overdraft facility agreements with various banks, including Shinhan Bank, with a limit of \\$27,000 million (December 31, 2015: \\$32,000 million). The total limit of overdrafts and comprehensive limits provided by financial institutions to the overseas subsidiaries of LG Innotek Co., Ltd. is \\$201,888 million (December 31, 2015: \\$224,663 million).

Other subsidiaries have overdraft facility agreements with a limit of #1,591,226 million (December 31, 2015: #1,339,424 million) with Citibank and others.

(b) At the end of the reporting period, the Parent Company has sales agreements for export trade receivables with KEB Hana Bank and 19 other banks amounting to ₩2,535,433 million (December 31, 2015: ₩2,872,042 million) and has sales agreements for domestic trade receivables with BTMU amounting to ₩500,000 million (December 31, 2015: ₩300,000 million).

In addition, LG Innotek Co., Ltd. has trade receivables transfer agreements with various banks, including KEB Hana Bank, amounting to #245,326 million (December 31, 2015: #308,616 million) at the end of the reporting period.

In addition, other subsidiaries transfer their trade receivable to Societe Generale Bank on a revolving basis, for up to US\$ 262 million (December 31, 2015: US\$ 284 million), and have sales agreements for trade receivables with a limit of US\$ 420 million (December 31, 2015: US\$ 190 million) with BTMU. In addition, other subsidiaries have entered into corporate electronic settlement services contracts and discount note agreements with Shinhan Bank and others with a limit of #48,000 million (December 31, 2015: #26,000 million) in connection with the collection of the trade receivables.

(c) At the end of the reporting period, the Parent Company has corporate electronic settlement services contracts and vendor prepayment services contracts with Shinhan Bank and seven other banks for up to #1,150,000 million (December 31, 2015: #1,320,000 million) which guarantee the payment of trade accounts payable in case the suppliers sell their trade receivables.

In addition, LG Innotek Co., Ltd. and its subsidiaries have provided payment guarantees to financial institutions, including Woori Bank, amounting to #146,251 million (December 31, 2015: #165,032 million) in connection with the discounting of notes which are paid to their suppliers.

In addition, other subsidiaries have contract arrangements such as corporate electronic settlement services contracts and note discount agreements with Shinhan Bank and other banks for up to ₩64,000 million limit (December 31, 2015: ₩56,000 million) to guarantee the payment of trade accounts payable.

(d) LG Innotek Co., Ltd., a subsidiary, has an agreement for underwriting commercial paper with a limit of #30,000 million (December 31, 2015: #40,000 million).

In addition, other subsidiaries have commercial paper agreements with Shinhan Bank and others for ₩40,000 million (December 31, 2015: ₩40,000 million).

(e) At the end of the reporting period, the Group has other trade financing agreements and loan commitments with financial institutions, including Shinhan Bank of up to #4,848,826 million (December 31, 2015: #4,620,485 million).

(f) Contractual commitments for the acquisition of assets

The property, plant and equipment and intangible assets contracted for, but not yet acquired at the end of the reporting period, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Property, plant and equipment	502,666	670,641
Intangible assets	28,591	4,028
Total	531,257	674,669

- (g) Operating lease commitments the Group as lessee
 - i) The future aggregate minimum lease payments under non-cancellable operating leases at the end of the reporting period, are as follows:

	December 31, 2016						
(in millions of Korean won)	Within 1 year	1 to 5 years	Over 5 years	Total lease payments			
Land	269	1,043	1,365	2,677			
Buildings	224,019	380,789	42,801	647,609			
Vehicles	29,373	33,504	-	62,877			
Equipment and others	18,375	16,086	-	34,461			
Total	272,036	431,422	44,166	747,624			

- Lease payment under operating lease recognized in the consolidated statement of profit or loss for the year ended December 31, 2016, is ₩337,588 million (2015: ₩333,619 million).
- iii) As of December 31, 2016, total future minimum sublease receipts under non-cancellable sublease agreements for some buildings amount to ₩14,265 million and lease income recognized related to the sublease for the year ended December 31, 2016, amounts to ₩10,021 million (2015: ₩10,131 million).
- (h) Operating lease commitments the Group as lessor
 - The Group has non-cancellable operating lease agreements regarding healthcare rental business that lends water purifiers to customers, and real estate rentals business. The future aggregate lease receipts under operating leases at the end of the reporting period, are as follows:

	December 31, 2016							
(in millions of Korean won)	Within 1 year 1 to 5 years Over 5 years Total lease payments							
Healthcare rental	122,804	194,709	-	317,513				
Real estate rental	2,646	1		2,647				
Total	125,450	194,710		320,160				

- ii) The Group recognized ₩113,117 million (2015: ₩99,981 million) in lease income for the year ended December 31, 2016.
- iii) Details of assets subject to operating lease are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Acquisition cost	261,409	238,757
Accumulated depreciation	(58,358)	(60,920)
Accumulated impairment	(793)	(827)
Net book amount	202,258	177,010

iv) Changes in net book amount of assets subject to operating lease for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
At January 1	177,010	44,568
Acquisition	76,660	34,945
Transfer	(8,906)	119,320
Disposal	(18,394)	(3,996)
Depreciation	(24,112)	(17,760)
Impairment loss		(67)
At December 31	202,258	177,010

(i) Finance lease commitments - the Group as lessee

At the end of the reporting period, the Group has entered into a finance lease agreement for vehicle lease and has recognized related assets and liabilities in the consolidated statements of financial position. Net book amount of the leased assets amounts to #3,687 million, and the present value of the finance lease liabilities amounts to #2,428 million.

As of December 31, 2016, future minimum lease payments under the finance lease agreement are as follows:

	Decembe	r 31, 2016	December 31, 2015			
(in millions of Korean won)	Minimum lease payments	PV of minimum lease payments	PV of Minimum lease minimum le payments payments			
Within 1 year	1,527	1,437	1,663	1,551		
1 to 5 years	1,045	991	1,682	1,579		
Total	2,572	2,428	3,345	3,130		

(j) Trademark license commitments

At the end of the reporting period, the Group has various agreements as follows:

Purpose	Related products	Provided by	Used by
Use of license	Mobile/LED	Qualcomm Incorporated and others	The Group
Provision of license	Home appliance/LED	The Group	Panasonic Corporation and others

36. Related Party

- (a) Major transactions for the years ended December 31, 2016 and 2015, and balances of receivables and payables from transaction with related parties as of December 31, 2016 and 2015, are as follows:
 - i) Major income and expense transactions with related parties

(in millions of Ko	rean won)	2016						
		Income transactions			Expense transactions			
Classification	Name	Sales	Others	Total	Purchases	Others	Total	
Significantly influencing the Group	LG Corp.	2,133	10,053	12,186	-	143,686	143,686	
Associates	LG Display Co., Ltd. and its subsidiaries	1,466,445	10,053	1,476,498	5,049,959	26,622	5,076,581	
	Ericsson-LG Co., Ltd. and its subsidiaries	8,060	-	8,060	4,537	-	4,537	
	Hitachi-LG Data Storage Inc. and its subsidiaries	873	340	1,213	119,465	1	119,466	
	LG Fuel Cell Systems Inc. and its subsidiaries	496	980	1,476	154	-	154	
	Korea Information Certificate Authority Inc.	-	-	-	-	1	1	
	Hi Logistics (China) Co., Ltd.	263	-	263	-	49,306	49,306	
	Subtotal	1,476,137	11,373	1,487,510	5,174,115	75,930	5,250,045	
Joint ventures	Arcelik-LG Klima Sanayi ve Ticaret A.S.(LGEAT)	48,689	-	48,689	35,399	-	35,399	
	LG Holdings (HK) Ltd. and its subsidiaries	-	-	-	-	2,780	2,780	
	EIC PROPERTIES PTE LTD.	-	-	-	-	850	850	
	LG-MRI LLC	291	-	291	21,015	1	21,016	
	Subtotal	48,980	-	48,980	56,414	3,631	60,045	
Other related parties	LG CNS Co., Ltd. and its subsidiaries SERVEONE Co., Ltd. and its	59,153	-	59,153	208,850	444,433	653,283	
	subsidiaries	84,269	-	84,269	1,363,658	198,951	1,562,609	
	LG Siltron Incorporated and its subsidiaries	4,988	-	4,988	42	-	42	
	LUSEM CO., LTD.	40,799	-	40,799	2,195	53	2,248	
	LG Management Development Institute	54	-	54	53	30,434	30,487	
	LG SPORTS Ltd.	37	-	37	-	10,285	10,285	
	LG MMA Ltd.	596	-	596	48	-	48	
	LG Holdings Japan Co., Ltd.	19	-	19	-	3,731	3,731	
	Subtotal	189,915	-	189,915	1,574,846	687,887	2,262,733	
Others ¹	LG Chem Ltd. and its subsidiaries and associates	384,118	6,960	391,078	634,472	7,207	641,679	
	LG INTERNATIONAL CORP and its subsidiaries	161,607	15,149	176,756	3,468,179	1,412,795	4,880,974	
	LG Uplus Corp and its subsidiaries	710,274	-	710,274	38,567	8,749	47,316	
	LG HAUSYS,LTD. and its subsidiaries and associates	25,911	-	25,911	40,274	198	40,472	
	Silicon Works Co., Ltd.	10,322	-	10,322	4,444	-	4,444	

(in millions of Ko	(in millions of Korean won)		2016					
		Inco	me transactio	ons	Expe	ense transact	ions	
Classification	Name	Sales	Others	Total	Purchases	Others	Total	
	LG HOUSEHOLD & HEALTH CARE LTD and its subsidiaries	2,941	-	2,941	280	349	629	
	LG LIFE SCIENCES, LTD. and its subsidiaries	3,976	-	3,976	1	-	1	
	G R Inc. and its subsidiaries	365	-	365	70	214,070	214,140	
	LG Hitachi Ltd.	13	-	13	-	-		
	Subtotal	1,299,527	22,109	1,321,636	4,186,287	1,643,368	5,829,655	
	Total	3,016,692	43,535	3,060,227	10,991,662	2,554,502	13,546,164	

(in millions of Korean won)		2015						
		Inco	me transactio	ons	Expe	nse transact	ons	
Classification	Name	Sales	Others	Total	Purchases	Others	Total	
Significantly influencing the Group	LG Corp.	1,004	-	1,004	-	148,503	148,503	
Associates	LG Display Co., Ltd. and its subsidiaries	958,195	54,050	1,012,245	5,480,016	13,260	5,493,276	
	Ericsson-LG Co., Ltd. and its subsidiaries	9,617	-	9,617	5,161	-	5,161	
	Hitachi-LG Data Storage Inc. and its subsidiaries	13,128	-	13,128	123,816	146	123,962	
	LG Fuel Cell Systems Inc. and its subsidiaries	135	217	352	-	-	-	
	Korea Information Certificate Authority Inc.	-	-	-	-	1	1	
	Hi Logistics (China) Co., Ltd.	30	-	30	-	9,936	9,936	
	Subtotal	981,105	54,267	1,035,372	5,608,993	23,343	5,632,336	
Joint ventures	Arcelik-LG Klima Sanayi ve Ticaret A.S.(LGEAT) LG Holdings (HK) Ltd. and its	58,665	-	58,665	54,779	20	54,799	
	subsidiaries	-	-	-	-	3,090	3,090	
	EIC PROPERTIES PTE LTD.	-	-	-	-	839	839	
	Subtotal	58,665	-	58,665	54,779	3,949	58,728	
Other related parties	LG CNS Co., Ltd. and its subsidiaries	63,629	-	63,629	144,555	510,962	655,517	
	SERVEONE Co., Ltd. and its subsidiaries	49,544	-	49,544	1,083,339	179,136	1,262,475	
	LG Siltron Incorporated and its subsidiaries	7,441	-	7,441	6	-	6	
	LUSEM CO., LTD.	48,692	-	48,692	6,948	339	7,287	
	LG Management Development Institute	175	-	175	167	29,862	30,029	
	LG SPORTS Ltd.	30	-	30	-	11,156	11,156	
	LG MMA Ltd.	694	-	694	165	1	166	
	LG Holdings Japan Co., Ltd.	17	-	17	-	3,225	3,225	
	Subtotal	170,222	-	170,222	1,235,180	734,681	1,969,861	
Others ¹	LG Chem Ltd. and its subsidiaries and associates	352,929	345	353,274	553,388	11,456	564,844	
	LG INTERNATIONAL CORP and its subsidiaries LG Uplus Corp and its	119,055	105,400	224,455	4,179,423	480,506	4,659,929	
	subsidiaries	814,058	-	814,058	41,694	13,675	55,369	

(in millions of Ko	(in millions of Korean won)		2015								
		Inco	me transactio	ons	Expense transactions						
Classification	Name	Sales	Others	Total	Purchases	Others	Total				
	LG HAUSYS,LTD. and its subsidiaries and associates	31,116	-	31,116	39,165	1,664	40,829				
	Silicon Works Co., Ltd.	14,824	22,010	36,834	1,930	1,230	3,160				
	LG HOUSEHOLD & HEALTH CARE LTD and its subsidiaries	14,645	-	14,645	417	727	1,144				
	LG LIFE SCIENCES, LTD. and its subsidiaries	534	-	534	3	2	5				
	G R Inc. and its subsidiaries	151	-	151	344	168,550	168,894				
	LG Hitachi Ltd.	164	-	164	-	-	-				
	Subtotal	1,347,476	127,755	1,475,231	4,816,364	677,810	5,494,174				
Total		2,558,472	182,022	2,740,494	11,715,316	1,588,286	13,303,602				

¹ Although the entities are not the related parties of the Group in accordance with Korean IFRS 1024, the entities belong to a large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

ii) The balances of receivables from and payables to related parties

(in millions of K	íorean won)	December 31, 2016									
			Recei			Payables					
Classification	Name	Trade receivables	Loans	Other receivables	Total	Trade payables	Borrowings	Other payables	Total		
Significantly influencing the Group	LG Corp.	745	-	28,484	29,229	-	-	62	62		
Associates	LG Display Co., Ltd. and its subsidiaries	415,581	-	22,056	437,637	959,799	-	80,288	1,040,087		
	Ericsson-LG Co., Ltd. and its subsidiaries	235	-	529	764	706	-	-	706		
	Hitachi-LG Data Storage Inc. and its subsidiaries ¹	-	3,259	154	3,413	27,992	-	388	28,380		
	LG Fuel Cell Systems Inc. and its subsidiaries ¹	245	14,551	516	15,312	-	-	-	-		
	Subtotal	416,061	17,810	23,255	457,126	988,497	-	80,676	1,069,173		
Joint ventures	Arcelik-LG Klima Sanayi ve Ticaret A.S.(LGEAT)	4,082	-	421	4,503	344	-	-	344		
	LG Holdings (HK) Ltd. and its subsidiaries	-	-	-	-	-	-	1,180	1,180		
	EIC PROPERTIES PTE LTD.	-	-	-	-	-	-	72	72		
	LG-MRI LLC	341	-	-	341	8,218	-	-	8,218		
	Subtotal	4,423	-	421	4,844	8,562	-	1,252	9,814		
Other related parties	LG CNS Co., Ltd. and its subsidiaries	12,306	-	606	12,912	46,223	-	127,927	174,150		
	SERVEONE Co., Ltd. and its subsidiaries	31,598	-	60,826	92,424	330,230	-	131,198	461,428		
	LG Siltron Incorporated and its subsidiaries	1,186	-	-	1,186	-	-	30	30		
	LUSEM CO., LTD.	7,166	-	-	7,166	312	-	8	320		
	LG Management Development Institute	-	-	17,875	17,875	-	-	1,552	1,552		

(in millions of Korean won)		December 31, 2016									
			Recei	vables		Payables					
Classification	Name	Trade receivables	Loans	Other receivables	Total	Trade payables	Borrowings	Other payables	Total		
	LG MMA Ltd.	321	-	-	321	7	-	15	22		
	LG Holdings Japan Co., Ltd.	-	-	3,952	3,952	-	-	8	8		
	Subtotal	52,577	-	83,259	135,836	376,772	-	260,738	637,510		
Others ²	LG Chem Ltd. and its subsidiaries and associates LG INTERNATIONAL	102,241	-	32,789	135,030	258,590		4,112	262,702		
	CORP and its subsidiaries	58,437	-	15,539	73,976	269,466	-	187,712	457,178		
	LG Uplus Corp and its subsidiaries	61,117	-	1,389	62,506	833	-	109	942		
	LG HAUSYS,LTD. and its subsidiaries and associates	5,193	-	500	5,693	5,967	-	2,016	7,983		
	Silicon Works Co., Ltd.	2,366	-	9	2,375	734	-	328	1,062		
	LG HOUSEHOLD & HEALTH CARE LTD and its subsidiaries	1,310	-	-	1,310	86	-	823	909		
	LG LIFE SCIENCES, LTD. and its subsidiaries	1,224	-	-	1,224	-	-	-	-		
	G R Inc. and its subsidiaries	139	-	-	139	107,552	-	52,046	159,598		
	Subtotal	232,027	-	50,226	282,253	643,228	-	247,146	890,374		
	Total	705,833	17,810	185,645	909,288	2,017,059	-	589,874	2,606,933		

¹ During the period, the Group recognized additional equity method loss of ₩19,059 million for loans of Hitachi-LG Data Storage Inc. and others.

(in millions of Korean won)		December 31, 2015									
			Recei	vables		Payables					
Classification	Name	Trade receivables	Loans	Other receivables	Total	Trade payables	Borrowings	Other payables	Total		
Significantly influencing the Group	LG Corp.	8	-	30,352	30,360	-	-	593	593		
Associates	LG Display Co., Ltd. and its subsidiaries	197,862	-	40,168	238,030	1,004,655	-	35,697	1,040,352		
	Ericsson-LG Co., Ltd. and its subsidiaries	5	-	330	335	897	-	150	1,047		
	Hitachi-LG Data Storage Inc. and its subsidiaries	-	-	54	54	26,723	-	3	26,726		
	LG Fuel Cell Systems Inc. and its subsidiaries	-	14,111	224	14,335	-	-	-	-		
	Hi Logistics (China) Co., Ltd.	-	-	104	104	-	-	10,232	10,232		
	Subtotal	197,867	14,111	40,880	252,858	1,032,275	-	46,082	1,078,357		
Joint ventures	Arcelik-LG Klima Sanayi ve Ticaret A.S.(LGEAT)	6,227	-	1,734	7,961	2,497	_	2	2,499		
	LG Holdings (HK) Ltd. and its subsidiaries	-	-	-	-	-	-	1,534	1,534		
	EIC PROPERTIES PTE LTD.	-	-	-	-	-	-	71	71		
	Subtotal	6,227	-	1,734	7,961	2,497	-	1,607	4,104		

(in millions of Korean won)		December 31, 2015									
			Recei	vables	Payables						
Classification	Name	Trade receivables	Loans	Other receivables	Total	Trade payables	Borrowings	Other payables	Total		
Other related parties	LG CNS Co., Ltd. and its subsidiaries	7,744	-	755	8,499	21,493	-	200,068	221,561		
	SERVEONE Co., Ltd. and its subsidiaries	9,753	-	60,865	70,618	264,625	-	69,436	334,061		
	LG Siltron Incorporated and its subsidiaries	941	-	-	941	-	-	2,502	2,502		
	LUSEM CO., LTD.	6,055	-	-	6,055	364	-	2	366		
	LG Management Development Institute	-	-	17,864	17,864	8	-	1,094	1,102		
	LG SPORTS Ltd.	-	-	-	-	-	-	176	176		
	LG MMA Ltd.	41	-	-	41	-	-	9	9		
	LG Holdings Japan Co., Ltd.	-	-	3,706	3,706	-	-	-	-		
	Subtotal	24,534	-	83,190	107,724	286,490	-	273,287	559,777		
Others ²	LG Chem Ltd. and its subsidiaries and associates	55,498	-	936	56,434	145,639	-	1,946	147,585		
	LG INTERNATIONAL CORP and its subsidiaries	40,800	-	4,933	45,733	331,138	-	137,774	468,912		
	LG Uplus Corp and its subsidiaries LG HAUSYS,LTD. and its	96,979	-	7,144	104,123	-	-	410	410		
	subsidiaries and associates	6,438	-	337	6,775	5,127	-	193	5,320		
	Silicon Works Co., Ltd.	437	-	1,895	2,332	825	-	265	1,090		
	LG HOUSEHOLD & HEALTH CARE LTD and its subsidiaries	600	-	3	603	270	-	169	439		
	LG LIFE SCIENCES, LTD. and its subsidiaries	203	-	2	205	-	-	-	-		
	G R Inc. and its subsidiaries	-	-	85	85	61,415	-	40,171	101,586		
	Subtotal	200,955	-	15,335	216,290	544,414	-	180,928	725,342		
	Total	429,591	14,111	171,491	615,193	1,865,676		502,497	2,368,173		

² Although the entities are not the related parties of the Group in accordance with Korean IFRS 1024, the entities belong to a large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

iii) Significant capital transactions with related parties and others for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)		2016									
			Disidend	Cash distribution	Financing loan transactions		Financing borrowing transactions				
Classification Name		Dividend income	Dividend paid	(reduction)	Loans	Collections	Borrowings	Repayments			
Significantly influencing the Group	LG Corp.	-	22,038	-	-	-	-	-			
	LG Display Co., Ltd.	67,813	-	-	-	-	-	-			
	Ericsson-LG Co., Ltd.	3,750	-	(25,000)	-	-	-	-			
Associates	Korea Information Certificate Authority Inc.	70	-	1,136	-	-	-	-			
	Hitachi-LG Data Storage Inc.(HLDS)	-	-	40,066	22,772	-	-	-			
	LG Fuel Cell Systems Inc.	-	-	25,324	-	-	-	-			
	Total	71,633	22,038	41,526	22,772	-	-	-			

(in millions of Korean won)		2015								
			Dividend paid	Cash distribution (reduction)		cing loan sactions	Financing borrowing transactions			
Classification Name		Dividend income			Loans	Collections	Borrowings	Repayments		
Significantly influencing the Group	LG Corp.	-	22,038	-	-	-	-	-		
	LG Display Co., Ltd.	67,813	-	-	-	-	-	-		
	Ericsson-LG Co., Ltd.	3,250	-	-	-	-	-	-		
Associates	Korea Information Certificate Authority Inc.	60	-	-	-	-	-	-		
	LG Fuel Cell Systems Inc.	-	-	-	14,111	-	-	-		
	Total	71,123	22,038	-	14,111	-	-	-		

(b) The compensation paid or payable to key management personnel for the years ended December 31, 2016 and 2015, consist of:

(in millions of Korean won)	2016	2015
Wages and salaries	15,176	19,515
Post-employment benefits	4,274	6,626
Other long-term benefits	157	109
Total	19,607	26,250

Key management refers to the directors who have significant control and responsibilities on the Group's business plans, operations and control.

(c) There is no payment guarantee provided by the Group for the financial support of the related parties other than subsidiaries at the end of the reporting period.

- (d) There is no collateral provided by the Group for the financial support of related parties at the end of the reporting period.
- (e) The Group has not recognized any bad debt expense or allowance for trade receivables from related parties at the end of the reporting period.

37. Risk Management

Financial Risk Management

The Group's financial risk management ("FRM") policy supports each business division to achieve excellent performance solidly and continuously against market risk, credit risk and liquidity risk. In addition, FRM helps the Group to enhance cost competitiveness through cost-efficient financing cost by improving financial structure and effective cash management.

While cooperating with other divisions, the finance FD in the Parent Company mainly implements FRM. This involves setting-up risk management policies and recognizing, evaluating and hedging risks from a global point of view.

The Group anticipatively and systematically manages the financial risks over global business activities through its four overseas treasury centers in New Jersey (United States), Amsterdam (Netherlands), Beijing (China), and Singapore in coordination with the finance FD in the Parent Company. And it also helps to improve overseas subsidiaries' business competitiveness by performing integration of their finance functions.

The Group mitigates the adverse effects from financial risk by monitoring the risk periodically and updating FRM policy each year.

The carrying amount and profit or loss of each category of financial instruments and the details of borrowings related to the financial risk management are presented in Note 5 and Note 15, respectively.

(a) Market risk

i) Foreign exchange risk

Due to its multinational business operations, the Group is mainly exposed to foreign exchange risk on the US Dollar and Euro.

The purpose of foreign exchange risk management is to provide the foundation of a stable business operation by minimizing the uncertainty and volatility of foreign exchange gains and losses from foreign exchange rate fluctuations.

The Group's foreign exchange risk management is implemented under its own foreign exchange policy through which the Group can minimize the exposure to foreign exchange risk by preferentially making equal amount of foreign exchange assets and liabilities from general operating activities. And the Group continuously considers efficient foreign exchange risk

hedges against its remaining exposure with derivative financial instruments and scrutinizes changes in foreign exchange exposure and the results of hedging activities on a monthly basis. Speculative foreign exchange trading is prohibited in principle.

As of December 31, 2016 and 2015, if the foreign exchange rate of the Korean won fluctuated for monetary assets and liabilities denominated in major foreign currency other than functional currency by 10% while other variables were fixed, the effects on income (loss) before tax would be as follows:

	December	31, 2016	Decembe	r 31, 2015
(in millions of Korean won)	10% increase	10% decrease	10% increase	10% decrease
USD/KRW	(12,382)	12,382	19,679	(19,679)
EUR/KRW	31,934	(31,934)	49,706	(49,706)

ii) Interest rate risk

The Group is exposed to interest rate risk through changes in interest-bearing liabilities or assets. The risk mainly arises from borrowings and deposits held by financial institutions with variable interest rates linked to market interest rate changes in the future. The objective of interest rate risk management lies in improving corporate value by minimizing uncertainty caused by fluctuations in interest rates and minimizing net interest expense.

The Group minimizes its borrowings from others and optimizes its deposits by expanding internal finance sharing. The Group periodically establishes the plan for reaction by the monitoring trends of internal and external interest rates and minimizes the risk of net interest expense by properly operating short-term borrowings with variable interest rates and deposits.

If interest rates fluctuate by 1%p without other variables changing, the effects on income and expenses related to borrowings and deposits held by financial institutions with variable interest rates for the years ended December 31, 2016 and 2015, are as follows:

	2016		2015		
(in millions of Korean won)	1%p increase	1%p decrease	1%p increase	1%p decrease	
Interest income	29,060	(29,060)	25,793	(25,793)	
Interest expense	3,877	(3,877)	4,296	(4,296)	

iii) Details of derivatives contracts are as follows:

Hedging purposes

The Group entered into the cross-currency swap contracts and the interest rate swap contracts to hedge cash flow risks related to the floating interest rates and foreign exchange rates of debentures.

December 31, 2016	Contractor	Contracted amount <i>(in millions)</i>	Contracted currency rate	Interest rate (received)	Interest rate (paid)	Starting date	Expiration date
USD/KRW CRS	Shinhan Bank and others	USD 400	1,052.1 ~ 1,113.6	3ML+1.30 ~3ML+1.60	3.22 ~ 3.42	2013.07.31 ~2013.12.19	2017.06.19 ~2019.01.31
USD/BRL CRS	Standard Chartered and others	USD 97	3.2900 ~ 3.6450	1.30~2.54	11.95 ~ 13.20	2016.03.15 ~2016.07.07	2017.03.15 ~2017.06.29
KRW Interest rate swap	Woori Bank and others	KRW 1,170,000	-	3M CD+0.82 ~3M CD+1.14	3.07 ~ 4.53	2014.01.03 ~2015.07.07	2024.01.03 ~2030.07.07

At the end of the reporting period, the swap contracts are evaluated at fair value and the loss on valuation of the effective portion amounting to #55,973 million in 2016 (2015: gain on valuation amounting to #78,729 million) after applying the tax effect, is recognized in other comprehensive income(loss). The Group has reclassified #53,027 million to loss from equity in 2016 (2015: #98,577 million to gain from equity). Therefore, other comprehensive loss from cash flow hedges amounts to #2,946 million in 2016 (2015: #19,848 million) after applying the tax effect.

Trading purposes

The Group entered into the currency forward contracts to manage the risk against possible future changes in foreign exchange rates. The subsidiaries' currency forward contracts as of December 31, 2016, and related profit or loss for the year ended December 31, 2016, are as follows:

(in millions of Korean won)	Purchase	Sale	Loss on valuation	Loss on transaction
Currency forward	483,331	494,802	10,295	37,352

iv) Price risk

The Group is exposed to price risk through equity securities owned by the Group classified as available-for-sale financial assets in the consolidated financial statements.

The listed securities owned by the Group are traded in the open market, and related to KOSDAQ Index.

The effect of price index's fluctuation related to the listed securities on the equity (before applying the tax effect) is set out in the below table. The analysis is performed in respect of 30% increase/decrease in the price index under the assumption that other variations are consistent and the listed securities owned by the Group have correlation with the relevant past index.

	December	r 31, 2016	December 31, 2015		
(in millions of Korean won)	30% increase	30% decrease	30% increase	30% decrease	
KOSDAQ	3,575	(3,575)	3,673	(3,673)	

The valuation and the reclassified amounts of the available-for-sale financial assets related to

the market risk above are presented in Note 8.

(b) Credit risk

The Group operates a consistent Global Credit / TR (trade receivables) policy to manage credit risk exposures.

In regard to receivables, the Group operates an integrated receivable insurance program with the world top three receivable insurers (Euler Hermes, Atradius and Coface) and Korea Trade Insurance Corporation (K-SURE). In an effort to minimize receivable credit risk, the Group applies the credit rating of the counterparty when determining the insurance coverage. In addition, the Group performs stringent credit risk management based on credit valuation criteria for receivables without insurance coverage or collateral.

Details of credit quality for trade receivables that are neither past due nor impaired are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Trade receivables with insurance or collateral		
Excellent	2,018,681	1,289,399
Good	815,379	819,223
Fair	1,583,315	1,828,147
Poor ¹	680,106	1,040,630
Subtotal	5,097,481	4,977,399
Trade receivables without insurance or collateral		
Tier 1	757,863	767,073
Tier 2	228,180	153,195
Tier 3	215,346	141,671
Subtotal	1,201,389	1,061,939
Total	6,298,870	6,039,338

¹Debtors with insurance or collateral, but without credit rating are included herein.

Criteria of categorizing trade receivables with insurance or collateral are as follows:

Category	Atradius	Euler	Coface	K-SURE
Excellent	1~28	1~3	8~10	A~B
Good	29~40	4~5	7	С
Fair	41~72	6~7	3~6	D~E
Poor	73~	8~10	0~2	F~R

Criteria of categorizing trade receivables without insurance or collateral are as follows:

Tier 1 - National or local government, domestic and global credit rating agency AA- ~ AAA+

Tier 2 – Debtors with domestic and global credit rating other than Tier 1

Tier 3 – Small debtors without credit history

The credit rating of cash equivalents and deposits held by financial institutions estimated by the Group using external credit rating criteria as of December 31, 2016 and 2015, is as follows:

Category	December 31, 2016	December 31, 2015
Excellent	2,886,947	2,396,684
Good	174,612	167,316
Others	91,853	303,200
Total	3,153,412	2,867,200

Excellent: Equal to or more than A-(Global credit rating agency such as S&P), AAA(Domestic credit rating agency such as Korea investors service)

Good: Equal to or more than BBB-(Global credit rating agency such as S&P), AA(Domestic credit rating agency)

Others: Financial deposit without credit rating

(c) Liquidity risk

The Group forecasts its cash flow and liquidity status, and sets action plans on a regular basis to manage liquidity risk proactively. The Group systematically works with experts in four RTCs to carry out fund and liquidity management that can react proactively to the changing global financial environment.

The Group maintains adequate amount of cash and committed credit facilities in Kookmin Bank, Shinhan Bank and others to cope with potential financial distress.

In addition, the Group is able to source funds any time in the domestic and international financial markets as of the end of reporting period because it has good investment credit grades of AA Stable from Korea Investors Service, Korea Ratings and NICE Information Service, BBB from Standard & Poors, and Baa3 from Moody's as of December 31, 2016.

i) Cash flow information on maturity of financial liabilities as of December 31, 2016, are as follows:

(in millions of Korean won)	Total	Within 1 year	1 to 2 years	3 to 5 years	Over 5 years
Trade payables	6,746,361	6,746,361	-	-	-
Borrowings	9,898,514	1,892,679	1,176,728	3,431,712	3,397,395
Other payables	3,206,526	3,197,338	2,656	1,059	5,473
Derivative liabilities	8,041	8,041	-	-	-
Total	19,859,442	11,844,419	1,179,384	3,432,771	3,402,868

The above cash flows are calculated at nominal value based on the earliest maturity dates and include cash flows of principal and interests. The Group's trading portfolio derivative liabilities that are not qualified for hedge accounting have been included at their fair value of \8,041 million within the less than 1-year time bucket. This is because the contractual maturities are not essential for an understanding of the timing of the cash flows. These contracts are managed on a net-fair value basis rather than by maturity date. Derivatives for cash flow hedges from changes in interest rate and exchange rate are reflected in the cash flows of related borrowings.

ii) The maturity analysis of financial guarantee contracts provided by the Group to third party companies as of December 31, 2016, are as follows:

		Within 1			Over 5
(in millions of Korean won)	Total	year	1 to 2 years	3 to 5 years	years
Financial guarantee contracts	46,000	46,000	-	-	-

The above cash flow is the maximum amount of guarantees allocated to earliest period in which the Group can be required to make payments.

Capital Risk Management

The Group's capital risk management purpose is to maximize shareholders' value through maintaining a sound capital structure. The Group monitors financial ratios, such as liability to equity ratio and net borrowing ratio each month and implements required action plan to improve the capital structure.

Debt-to-equity ratio and net borrowing ratio as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won, except for ratios)	December 31, 2016	December 31, 2015
Liability (A)	24,498,527	23,330,409
Equity (B)	13,356,742	12,983,487
Cash and cash equivalents (C)	3,015,137	2,710,156
Borrowings (D)	8,659,011	8,827,250
Debt-to-equity ratio (A/B)	183.4%	179.7%
Net borrowings ratio ((D-C)/B)	42.3%	47.1%

Fair Value Estimation

(a) The book amounts and fair values of the Group's financial assets and liabilities as of December 31, 2016 and 2015, are as follows:

	December 31, 2016					
	Curre	ent	Non-cu	rrent		
(in millions of Korean won)	Book amount	Fair value	Book amount	Fair value		
Assets at fair value						
Financial assets at fair value through profit or loss						
Other financial assets	557	557	-	-		
Derivatives for hedging purposes						
Other financial assets	30,093	30,093	16,091	16,091		
Available-for-sale financial assets						
Other financial assets	-	-	14,837	14,837		
Assets at amortized cost						
Loans and other receivables						
Cash and cash equivalents	3,015,137	1	-	-		
Deposits held by financial institutions	80,559	1	58,195	58,195		
Trade receivables	7,059,889	1	-	-		
Other receivables	545,766	1	490,178	477,590		
Held-to-maturity financial assets						
Other financial assets	-	1	117	1		
Assets at cost						
Available-for-sale financial assets						
Other financial assets	-	-	35,102	2		
Total	10,732,001		614,520			

		December	31, 2016			
	Curre	ent	Non-cui	rrent		
(in millions of Korean won)	Book amount	Fair value	Book amount	Fair value		
Liabilities at fair value						
Financial liabilities at fair value through profit or loss						
Other financial liabilities	8,041	8,041	-	-		
Derivatives for hedging purposes						
Other financial liabilities	12,960	12,960	73,226	73,226		
Liabilities at amortized cost						
Trade payables	6,746,361	1	-	-		
Borrowings	1,650,511	1	7,008,500	7,194,685		
Other payables	3,196,735	1	7,771	6,923		
Other liabilities						
Other financial liabilities	114	3	-	3		
Total	11,614,722		7,089,497			

		December	nber 31, 2015			
	Curre	ent	Non-current			
(in millions of Korean won)	Book amount Fair value		Book amount	Fair value		
Assets at fair value						
Financial assets at fair value through profit or loss						
Other financial assets	13,806	13,806	-	-		
Derivatives for hedging purposes						
Other financial assets	4,347	4,347	30,287	30,287		
Available-for-sale financial assets						
Other financial assets	-	-	16,531	16,531		
Assets at amortized cost						
Loans and other receivables						
Cash and cash equivalents	2,710,156	1	-	-		
Deposits held by financial institutions	87,454	1	69,970	69,970		
Trade receivables	7,093,352	1	-	-		
Other receivables	654,141	1	506,788	497,253		
Held-to-maturity financial assets						
Other financial assets	2,521	1	117	1		
Assets at cost						
Available-for-sale financial assets						
Other financial assets	-	-	37,875	2		
Total	10,565,777		661,568			

		December 31, 2015				
	Curre	ent	Non-cu	rrent		
(in millions of Korean won)	Book amount	Fair value	Book amount	Fair value		
Liabilities at fair value						
Financial liabilities at fair value through profit or loss						
Other financial liabilities	3,368	3,368	-	-		
Derivatives for hedging purposes						
Other financial liabilities	10,184	10,184	69,618	69,618		
Liabilities at amortized cost						
Trade payables	6,086,975	1	-	-		
Borrowings	2,326,128	1	6,501,122	7,064,295		
Other payables	2,840,217	1	13,518	12,555		
Other liabilities						
Other financial liabilities	271	3	308	3		
Total	11,267,143		6,584,566			

¹ Excluded from disclosure as the carrying amount is the reasonable approximate of fair value.

² Unlisted equity securities are calculated at cost because the variability in the range of the estimated future cash flows is significant and the probabilities of the various estimates within the range cannot be reasonably assessed. As of December 31, 2016, there is no asset to be disposed of in near future.

³ Measured at the higher of the amount determined in accordance with Korean IFRS 1037, '*Provisions, Contingent Liabilities and Contingent Assets*', and the amount initially recognized less cumulative amortization recognized in accordance with Korean IFRS 1018, '*Revenue*'.

- (b) Fair value measurements of assets and liabilities
 - i) Fair value hierarchy and measurement method

The fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The fair value measurement is to estimate 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 under current market conditions. When measuring fair value using valuation techniques, the Group maximizes the use of market information and minimizes the use of unobservable inputs.

Financial instruments measured at fair value are categorized within the fair value hierarchy, and the defined levels are as follows:

- Level 1: Financial instruments measured at the quoted prices in an active market for identical assets or liabilities are included in 'level 1'. Assets or liabilities categorized within 'level 1' include financial instruments such as marketable equity securities traded.

- Level 2: When financial instruments are measured by using a discounted cash flow, if all significant inputs required to measure the fair value of an instrument are observable, the instrument is included in 'level 2'. Assets or liabilities categorized within 'level 2' include financial instruments such as derivative financial instruments.

- Level 3: When financial instruments are measured by using a discounted cash flow, if one or more of the significant inputs are unobservable market data, the instrument is included in 'level 3'. Assets or liabilities categorized within 'level 3' include financial instruments such as debt securities.

The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting period. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, an entity within the same industry, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price for financial assets held by the Group is the closing price at the end of the reporting period. These instruments are included in 'level 1'. Instruments included in 'level 1' comprise primarily equity investments classified as available for sale.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Group uses various valuation techniques and makes judgements based on current market conditions. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to measure the fair value of an instrument are observable, the instrument is included in 'level 2'.

If one or more of the significant inputs are not based on observable market data, the instrument is included in 'level 3'. Financial instrument included 'level 3' uses other method including discounting cash flow method.

ii) Financial instruments measured at fair value

Fair value hierarchy classifications of the financial assets and financial liabilities that are measured at fair value as of December 31, 2016 and 2015, are as follows:

		December 31, 2016				
(in millions of Korean won)	Level 1 Level 2		Level 3	Total		
Assets						
Other financial assets						
Available-for-sale financial assets						
- Marketable equity securities	14,837	-	-	14,837		
Financial assets at fair value through profit or loss	-	557	-	557		
Derivatives for hedging purposes	-	46,184	-	46,184		
Liabilities						
Other financial liabilities						
Financial liabilities at fair value through profit or loss	-	8,041	-	8,041		
Derivatives for hedging purposes	-	86,186	-	86,186		

	December 31, 2015					
(in millions of Korean won)	Level 1	Level 2	Level 3	Total		
Assets						
Other financial assets						
Available-for-sale financial assets						
- Marketable equity securities	15,329	-	-	15,329		
- Debt securities	-	-	1,202	1,202		
Financial assets at fair value through profit or loss	-	13,806	-	13,806		
Derivatives for hedging purposes	-	34,634	-	34,634		
Liabilities						
Other financial liabilities						
Financial liabilities at fair value through profit or loss	-	3,368	-	3,368		
Derivatives for hedging purposes	-	79,802	-	79,802		

The above fair value amounts are recurring fair value measurements.

In case of investments in equity instruments that do not have a quoted market price in an active market and their fair value cannot be measured reliably, they are measured at cost and not included in the above fair value measurement hierarchy.

- Valuation technique and inputs for fair value measurements categorized within 'level 2'

Valuation technique and inputs for fair value measurements categorized within 'level 2' as of December 31, 2016 and 2015, are as follows:

	Fair	value		
(in millions of Korean won)	(in millions of Korean won) December 31, 2016		Valuation techniques	Inputs
Assets				
Other financial assets				
Financial assets at fair value through profit or loss	557	13,806	Discounted cash flow	Discount rate and exchange rate
Derivatives for hedging purposes	46,184	34,634	Discounted cash flow	Discount rate and exchange rate
Liabilities				
Other financial liabilities				
Financial liabilities at fair value through profit or loss	8,041	3,368	Discounted cash flow	Discount rate and exchange rate
Derivatives for hedging purposes	86,186	79,802	Discounted cash flow	Discount rate and exchange rate

- Fair value measurements categorized within 'level 3'

Changes in financial assets and financial liabilities that are measured at fair value and categorized within 'level 3' for the years ended December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	2016	2015
At January 1	1,202	1,422
Total gain(loss) for the period		
Gain(loss) included in profit for the period ¹	(626)	81
Gain(loss) included in other comprehensive income	-	(14)
Purchase, issue, sales and settlement		
Purchase	-	-
Sale and others	(576)	(287)
At December 31	-	1,202

 1 Gain and loss included in profit for the period are interest income amounting to $\4$ million and impairment loss $\630$ million for the year ended December 31, 2016 (2015: interest income $\81$ million).

Valuation technique, inputs, and range of significant but unobservable inputs of financial instruments that are measured at fair value and categorized within 'level 3' as of December 31, 2016 and 2015, are as follows:

	Fair value				Significant but	Range of significant but
(in millions of Korean won)	December 31, 2016	December 31, 2015	Valuation techniques	Inputs	unobservable inputs	unobservable inputs
Other financial assets						
Available-for-sale financial assets						
- Debt securities	-	1,202	Discounted cash flow	Discount rate	Discount rate (credit spread)	-

iii) Financial instruments not measured at fair value but for which the fair value is disclosed

Financial instruments not measured at fair value but for which the fair value is disclosed as of December 31, 2016 and 2015, are as follows:

	December 31, 2016				
(in millions of Korean won)	Level 1 Level 2		Level 3	Total	
Assets					
Non-current deposits held by financial institutions	-	-	58,195	58,195	
Non-current other receivables	-	-	477,590	477,590	
Liabilities					
Non-current borrowings	-	-	7,194,685	7,194,685	
Non-current other payables	-	-	6,923	6,923	

	December 31, 2015				
(in millions of Korean won)	Level 1	Level 2	Level 3	Total	
Assets					
Non-current deposits held by financial institutions	-	-	69,970	69,970	
Non-current other receivables	-	-	497,253	497,253	
Liabilities					
Non-current borrowings	-	-	7,064,295	7,064,295	
Non-current other payables	-	-	12,555	12,555	

- Valuation technique and inputs for fair value measurements categorized within 'level 2'

As of December 31, 2016, there are no financial instruments that are not measured at fair value but for which the fair value is disclosed and categorized within 'level 2'.

- Disclosure in relation to fair value measurements categorized within 'level 3'

Valuation technique, inputs and unobservable inputs of financial instruments that are not measured at fair value but for which the fair value is disclosed and categorized within 'level 3' as of December 31, 2016 and 2015, are as follows:

	December 31, 2016		December 31, 2015		December 31, 2016 December 31, 2015				Significant but	Range of significant but
(in millions of Korean won)	Carrying amount	Fair value	Carrying amount	Fair value	Valuation techniques	Inputs	unobservable inputs	unobservable inputs		
Assets										
Non-current deposits held by financial institutions	58,195	58,195	69,970	69,970	Discounted cash flow	Discount rate and exchange rate	Discount rate	0.1% ~ 1.8%		
Non-current other receivables	490,178	477,590	506,788	497,253	Discounted cash flow	Discount rate and exchange rate	Discount rate	3.1% ~ 3.6%		
Liabilities										
Non-current borrowings	7,008,500	7,194,685	6,501,122	7,064,295	Discounted cash flow	Discount rate and exchange rate	Discount rate	1.6% ~ 3.3%		
Non-current other payables	7,771	6,923	13,518	12,555	Discounted cash flow	Discount rate and exchange rate	Discount rate	1.8% ~ 2.7%		

38. Business Combinations

- (a) The Parent Company acquired the Power Conditioning System business from LG U plus Co., Ltd. on February 2, 2015, in order to maximize its market responsiveness by enhancing business capabilities in the Energy Storage System business, the Parent Company's future strategic business.
- (b) The following table summarizes the consideration paid and the fair value of assets acquired and liabilities assumed:

(in millions of Korean won)	Amount
Consideration	
Cash and cash equivalents	7,700
Recognized amounts of identifiable assets acquired and liabilities assumed	
Current assets	
Cash and cash equivalents	9
Trade receivables	66
Non-current assets	
Property, plant and equipment	2,513
Intangible assets	3,907
Non-current liabilities	
Net defined benefit liability	9
Total identifiable net assets	6,486
Goodwill	1,214

The acquisition-related direct costs in relation to business combination amounting to #147 million was recognized as an expense as the costs incurred and the above fair value of trade receivables and other receivables are the same as the contractual amounts in gross

(c) The Group acquired 100% ownership of LPRFIC Oy on July 1, 2015, in order to secure wireless high-frequency integrated circuit technology for modem solutions.

The following table summarizes the consideration paid and the fair value of assets acquired and liabilities assumed:

(in millions of Korean won)	Amount
Consideration	
Cash and cash equivalents	6,934
Contingent consideration ¹	3,131
Recognized amounts of identifiable assets acquired	
Current assets	
Cash and cash equivalents	3
Non-current assets	
Intangible assets	10,062
Total net assets	10,065

¹ The fair value of consideration, a part of payment for acquisition of shares held by employees of LPRFIC Oy, is contingent on completion of technology, and the nominal amount is ₩3,802 million. ₩1,899 million of contingent consideration was paid in July 2016.

The acquisition-related direct costs in relation to business combination amounting to #214 million was recognized as an expense as the costs incurred.

LG Electronics Finland Lab, Oy(LGEFL), a subsidiary of the Group, merged with LPRFIC Oy on December 31, 2015. The merger does not have an impact on these consolidated financial statements.

(d) On December 31, 2015, LG Innotek Co., Ltd., a subsidiary of the Group, acquired the metal power inductor business of Changsung Corporation, which excels in magnetic materials manufacturing technique for ₩14,000 million, in order to concentrate on fostering material/device business.

The following table summarizes the consideration paid and the fair value of assets acquired and liabilities assumed:

(in millions of Korean won)	Amount
Consideration	
Cash and cash equivalents	14,000
Recognized amounts of identifiable assets acquired	
Non-current assets	
Property, plant and equipment	8,505
Intangible assets	1,228
Total identifiable net assets	9,733
Goodwill	4,267

The acquisition-related direct costs in relation to business combination amounting to #29 million was recognized as an expense as the costs incurred.

39. Assets Classified as Held for Sale

(a) Details of assets classified as held for sale as of December 31, 2016 and 2015, are as follows:

(in millions of Korean won)	December 31, 2016	December 31, 2015
Assets classified as held for sale		
Investment property ¹	8,906	-
Investment in associates and joint ventures ²	-	3,619

¹ The Group entered into a sales contract on December 2, 2016, and the investment property will be sold within the first quarter of 2017.

- ² In accordance with the resolution of the Board of Directors dated October 28, 2015, the Group decided to dispose of its entire shareholdings in Hi Logistics (China) Co., Ltd., in which the Group owns 35%, for the purpose of logistics cost reduction and rapid response to customers. The sale was completed in December, 2016.
- (b) Assets held for sale are measured at fair value less costs to sell before the reclassification, and there is no impairment loss recognized.

40. Discontinued Operations

As a result of the decreased demand for PDP TV products, the Group discontinued its operations of the PDP modules and PDP TV on November 30, 2014, in order to focus on its OLED TV and LCD TV division going forward.

(a) Loss for the period from discontinued operations for the year ended December 31, 2015, consists of:

(in millions of Korean won)	2015
Net sales	27,884
Operating loss	(4,510)
Loss for the period before income tax benefit	(4,551)
Income tax benefit	(723)
Loss for the period, net of tax	(3,828)

For the year ended December 31, 2015, a gain on disposal of property, plant and equipment of \63 million was recognized based on the recoverable amount of assets due to the discontinued operations of PDP modules and PDP TV.

(b) Cash generated from discontinued operations for the year ended December 31, 2015, are as follows:

(in millions of Korean won)	2015
Net cash flows from operating activities	25,556
Net cash flows from investing activities	68
Net cash flow from discontinued operations	25,624

41. Approval of the Consolidated Financial Statements

The issuance of the December 31, 2016 consolidated financial statements of the Group was approved by the Board of Directors on January 24, 2017.