

# **LG Chem, Ltd. and Subsidiaries**

**Consolidated Interim Financial Statements**

**September 30, 2017 and 2016**

**LG Chem, Ltd. and Subsidiaries**  
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**September 30, 2017 and 2016**

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## Report on Review of Interim Financial Statements

(English Translation of a Report Originally Issued in Korean)

To the Shareholders and Board of Directors of  
LG Chem, Ltd.

### **Reviewed Financial Statements**

We have reviewed the accompanying consolidated interim financial statements of LG Chem, Ltd. and its subsidiaries (collectively referred to as the "Group"). These financial statements consist of the consolidated interim statement of financial position of the Group as at September 30, 2017, and the related consolidated interim statements of profit or loss and comprehensive income for the three-month and nine-month periods ended September 30, 2017 and 2016, and consolidated interim statements of changes in equity and cash flows for the nine-month periods ended September 30, 2017 and 2016, and a summary of significant accounting policies and other explanatory notes, expressed in Korean won.

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

Management is responsible for the preparation and fair presentation of these consolidated interim financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS") 1034 *Interim Financial Reporting*, and for such internal control as management determines is necessary to enable the preparation of consolidated interim financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditor's Responsibility**

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

We conducted our review in accordance with quarterly or semi-annual review standards established by the Securities and Futures Commission of the Republic of Korea. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Korean Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.



**Conclusion**

Based on our review, nothing has come to our attention that causes us to believe the accompanying consolidated interim financial statements are not presented fairly, in all material respects, in accordance with Korean IFRS 1034 *Interim Financial Reporting*.

**Other Matters**

We have audited the consolidated statement of financial position of the Group as at December 31, 2016, and the related consolidated statements of profit or loss, comprehensive income, changes in equity and cash flows for the year then ended, in accordance with Korean Standards on Auditing. We expressed an unqualified opinion on those financial statements, not presented herein, in our audit report dated March 8, 2017. The consolidated statement of financial position as at December 31, 2016, presented herein for comparative purposes, is consistent, in all material respects, with the above audited statement of financial position as at December 31, 2016.

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

November 14, 2017  
Seoul, Korea

This report is effective as of November 14, 2017, the review report date. Certain subsequent events or circumstances, which may occur between the review report date and the time of reading this report, could have a material impact on the accompanying consolidated interim financial statements and notes thereto. Accordingly, the readers of the review report should understand that there is a possibility that the above review report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.



**LG Chem, Ltd. and Subsidiaries**  
**Consolidated Interim Statements of Financial Position**  
**September 30, 2017 and December 31, 2016**

<i>(in millions of Korean won)</i>	Notes	September 30, 2017 (Unaudited)	December 31, 2016
<b>Assets</b>			
<b>Current assets</b>			
Cash and cash equivalents	3, 5, 6	1,780,623	1,474,367
Trade receivables	3, 5, 7, 31	4,522,820	3,533,699
Other receivables	3, 5, 7, 31	836,449	979,027
Prepaid income taxes		3,634	5,753
Other current assets	13	405,594	260,793
Inventories	9	3,187,314	2,965,191
Assets held for sale	35	9,530	8,104
Total current assets		10,745,964	9,226,934
<b>Non-current assets</b>			
Other receivables	3, 5, 7	131,880	233,152
Other financial assets	3, 5, 8	24,531	23,448
Investments in associates and joint ventures	1, 10, 33	280,945	260,828
Deferred income tax assets	28	283,378	170,177
Property, plant and equipment	11	10,313,725	9,680,133
Intangible assets	12	1,816,357	832,144
Investment properties		2,264	2,287
Other non-current assets	13	108,506	57,957
Total non-current assets		12,961,586	11,260,126
<b>Total assets</b>		<b>23,707,550</b>	<b>20,487,060</b>
<b>Liabilities</b>			
<b>Current liabilities</b>			
Trade payables	3, 5, 31	1,755,874	1,723,252
Other payables	3, 5, 31	1,114,682	971,605
Borrowings	3, 5, 14	1,361,389	2,212,641
Provisions	15	53,156	51,694
Income tax payables		452,067	217,973
Other current liabilities	5, 17	413,290	269,644
Liabilities held for sale	35	31	42
Total current liabilities		5,150,489	5,446,851
<b>Non-current liabilities</b>			
Other payables	3, 5	8,756	14,307
Borrowings	3, 5, 14	1,915,017	678,000
Provisions	15	207,785	133,821
Net defined benefit liabilities	16	216,325	92,172
Deferred income tax liabilities		39,568	40,675
Other non-current liabilities	17	47,812	30,267
Total non-current liabilities		2,435,263	989,242
<b>Total liabilities</b>		<b>7,585,752</b>	<b>6,436,093</b>

**LG Chem, Ltd. and Subsidiaries**  
**Consolidated Interim Statements of Financial Position**  
**September 30, 2017 and December 31, 2016**

<i>(in millions of Korean won)</i>	<b>Notes</b>	<b>September 30, 2017 (Unaudited)</b>	<b>December 31, 2016</b>
<b>Equity</b>			
Share capital	1, 19	391,406	369,500
Capital surplus		2,274,386	1,157,772
Other components of equity	21	(360,889)	(15,699)
Accumulated other comprehensive income		(53,104)	(36,993)
Retained earnings	20	13,713,763	12,462,772
<b>Equity attributable to owners of the Parent Company</b>		<u>15,965,562</u>	<u>13,937,352</u>
<b>Non-controlling interest</b>		<u>156,236</u>	<u>113,615</u>
<b>Total equity</b>		<u>16,121,798</u>	<u>14,050,967</u>
<b>Total liabilities and equity</b>		<u>23,707,550</u>	<u>20,487,060</u>

The above consolidated interim statements of financial position should be read in conjunction with the accompanying notes.

**LG Chem, Ltd. and Subsidiaries**  
**Consolidated Interim Statements of Profit or Loss**  
**Three-Month and Nine-Month Periods Ended September 30, 2017 and 2016**

<i>(in millions of Korean won, except per share amounts)</i>	<b>Notes</b>	<b>Period Ended September 30</b>			
		<b>2017</b>		<b>2016</b>	
		<b>(Unaudited)</b>		<b>(Unaudited)</b>	
		<b>Three months</b>	<b>Nine months</b>	<b>Three months</b>	<b>Nine months</b>
<b>Revenue</b>	31, 33	6,397,083	19,265,812	5,054,278	15,147,600
<b>Cost of sales</b>	23, 31	(4,940,129)	(15,024,391)	(4,091,441)	(12,105,539)
<b>Gross profit</b>		1,456,954	4,241,421	962,837	3,042,061
Selling and administrative expenses	22, 23, 31	(667,256)	(1,927,945)	(502,840)	(1,511,865)
<b>Operating profit</b>	33	789,698	2,313,476	459,997	1,530,196
Finance income	5, 25	69,595	188,795	49,896	129,940
Finance costs	5, 25	(62,850)	(219,312)	(81,363)	(208,364)
Share of profit or loss of associates and joint ventures accounted for using the equity method	10	662	4,320	(1,489)	(6,700)
Other non-operating income	5, 26	114,325	374,605	143,027	344,957
Other non-operating expenses	5, 27, 35	(209,050)	(531,609)	(191,486)	(488,278)
<b>Profit before income tax</b>	32	702,380	2,130,275	378,582	1,301,751
<b>Income tax expense</b>	28	(156,928)	(446,404)	(81,154)	(290,714)
<b>Profit for the period</b>		545,452	1,683,871	297,428	1,011,037
<b>Profit is attributable to:</b>					
Owners of the Parent Company		520,952	1,629,519	295,600	1,012,274
Non-controlling interests		24,500	54,352	1,828	(1,237)
<b>Earnings per share attributable to the equity holders of the Parent Company</b>	29				
Basic and diluted earnings per ordinary share		6,799	21,266	4,019	13,762
Basic and diluted earnings per preferred share		6,811	21,303	4,031	13,799

The above consolidated interim statements of profit or loss should be read in conjunction with the accompanying notes.

**LG Chem, Ltd. and Subsidiaries**  
**Consolidated Interim Statements of Comprehensive Income**  
**Three-Month and Nine-Month Periods Ended September 30, 2017 and 2016**

	Notes	Period Ended September 30			
		2017		2016	
		(Unaudited)		(Unaudited)	
		Three months	Nine months	Three months	Nine months
<i>(in millions of Korean won)</i>					
<b>Profit for the period</b>		545,452	1,683,871	297,428	1,011,037
<b>Other comprehensive income</b>					
<i>Items that will not be reclassified to profit or loss</i>					
Remeasurements of net defined benefit liabilities	16	(2,709)	(12,927)	(1,142)	(3,061)
Shares of remeasurements of net defined benefit liabilities of associates		(5)	58	2	7
Income tax relating to these items		655	3,127	276	741
<i>Items that may be subsequently reclassified to profit or loss</i>					
Exchange differences on translation of foreign operations		44,488	(8,304)	(89,236)	(115,331)
Changes in valuation on available-for-sale financial securities	8	(2,096)	(3,425)	2,397	6,255
Shares of other comprehensive income of joint ventures and associates		(581)	(4,104)	(4,370)	(7,834)
Reclassification from disposal of joint ventures		-	-	-	45,215
Income tax relating to these items		1,958	129	(4,365)	(17,429)
<b>Other comprehensive income for the period, net of tax</b>		<u>41,710</u>	<u>(25,446)</u>	<u>(96,438)</u>	<u>(91,437)</u>
<b>Total comprehensive income for the period</b>		<u>587,162</u>	<u>1,658,425</u>	<u>200,990</u>	<u>919,600</u>
<b>Total comprehensive income for the period is attributable to:</b>					
Owners of the Parent Company		558,198	1,603,663	204,711	928,411
Non-controlling interest		28,964	54,762	(3,721)	(8,811)

The above consolidated interim statements of comprehensive income should be read in conjunction with the accompanying notes.

**LG Chem, Ltd. and Subsidiaries**  
**Consolidated Interim Statements of Changes in Equity**  
**Nine-Month Periods Ended September 30, 2017 and 2016**

(in millions of Korean won)

Notes	Attributable to owners of the Parent Company						Non-controlling interests	Total equity
	Share capital	Capital surplus	Other components of equity	Accumulated other comprehensive income	Retained earnings	Total		
<b>Balance at January 1, 2016</b>	369,500	1,157,772	(15,699)	(52,608)	11,532,500	12,991,465	112,057	13,103,522
<b>Comprehensive income</b>								
Profit (loss) for the period	-	-	-	-	1,012,274	1,012,274	(1,237)	1,011,037
Remeasurements of net defined benefit liabilities	16	-	-	-	(2,320)	(2,320)	-	(2,320)
Exchange differences on translation of foreign operations		-	-	(112,892)	-	(112,892)	(7,574)	(120,466)
Changes in the fair value of available-for-sale financial instruments		-	-	4,741	-	4,741	-	4,741
Others		-	-	26,601	7	26,608	-	26,608
<b>Total comprehensive income for the period</b>		-	-	(81,550)	1,009,961	928,411	(8,811)	919,600
<b>Transactions with owners</b>								
Dividends	30	-	-	-	(331,287)	(331,287)	(15,259)	(346,546)
Issuance of shares by subsidiaries		-	-	-	-	-	12,891	12,891
Business combination	34	-	-	-	-	-	(16,177)	(16,177)
Others		-	-	-	(747)	(747)	(249)	(996)
<b>Total transactions with owners</b>		-	-	-	(332,034)	(332,034)	(18,794)	(350,828)
<b>Balance at September 30, 2016 (Unaudited)</b>		369,500	1,157,772	(15,699)	(134,158)	12,210,427	84,452	13,672,294
<b>Balance at January 1, 2017</b>		369,500	1,157,772	(15,699)	(36,993)	12,462,772	113,615	14,050,967
<b>Comprehensive income</b>								
Profit for the period		-	-	-	1,629,519	1,629,519	54,352	1,683,871
Remeasurements of net defined benefit liabilities	16	-	-	-	(9,803)	(9,803)	3	(9,800)
Exchange differences on translation of foreign operations		-	-	(9,412)	-	(9,412)	407	(9,005)
Changes in the fair value of available-for-sale financial instruments		-	-	(2,596)	-	(2,596)	-	(2,596)
Others		-	-	(4,103)	58	(4,045)	-	(4,045)
<b>Total comprehensive income for the period</b>		-	-	(16,111)	1,619,774	1,603,663	54,762	1,658,425
<b>Transactions with owners</b>								
Business combination	34	21,906	1,116,614	(337,211)	-	801,309	-	801,309
Purchase of treasury shares	34	-	-	(2,250)	-	(2,250)	-	(2,250)
Effects of changes in ownership of subsidiary		-	-	(5,729)	-	(5,729)	5,729	-
Dividends	30	-	-	-	(368,055)	(368,055)	(17,627)	(385,682)
Others		-	-	-	(728)	(728)	(243)	(971)
<b>Total transactions with owners</b>		21,906	1,116,614	(345,190)	(368,783)	424,547	(12,141)	412,406
<b>Balance at September 30, 2017 (Unaudited)</b>		391,406	2,274,386	(360,889)	(53,104)	13,713,763	156,236	16,121,798

The above consolidated interim statements of changes in equity should be read in conjunction with the accompanying notes.

**LG Chem, Ltd. and Subsidiaries**  
**Consolidated Interim Statements of Cash Flows**  
**Nine-Month Periods Ended September 30, 2017 and 2016**

<i>(in millions of Korean won)</i>	Notes	Nine-Month Period Ended September 30	
		2017 (Unaudited)	2016 (Unaudited)
<b>Cash flows from operating activities</b>			
Cash generated from operations	32	2,498,360	2,485,840
Interest received		22,300	33,707
Interest paid		(76,274)	(51,774)
Dividends received		11,154	927
Income taxes paid		(347,820)	(546,893)
<b>Net cash inflow from operating activities</b>		<b>2,107,720</b>	<b>1,921,807</b>
<b>Cash flows from investing activities</b>			
Decrease in other receivables		818,132	561,539
Decrease in other non-current receivables		62,666	45,346
Proceeds from disposal of investments in subsidiaries		343	-
Proceeds from disposal of investments in joint ventures		-	23,724
Proceeds from disposal of available-for-sale financial assets		-	41
Proceeds from disposal of property, plant and equipment		13,793	13,141
Proceeds from disposal of intangible assets		7,727	540
Government grants received		29,628	-
Business combination, net of cash acquired		43,759	(483,966)
Proceeds from disposal of business	34	2,022	-
Increase in other receivables		(699,489)	(521,888)
Increase in other non-current receivables		(58,775)	(93,875)
Acquisition of investments in associates and joint ventures		(28,720)	(17,555)
Acquisition of available-for-sale financial assets		(2,191)	(3,346)
Acquisition of property, plant and equipment		(1,326,999)	(956,129)
Acquisition of intangible assets		(64,257)	(53,072)
<b>Net cash outflow from investing activities</b>		<b>(1,202,361)</b>	<b>(1,485,500)</b>
<b>Cash flows from financing activities</b>			
Proceeds from borrowings		1,306,737	620,551
Capital contribution from non-controlling interests		-	12,969
Repayments of borrowings		(1,523,486)	(510,387)
Dividends paid		(385,682)	(346,485)
Purchase of treasury shares		(2,250)	-
<b>Net cash outflow from financing activities</b>		<b>(604,681)</b>	<b>(223,352)</b>
<b>Net increase in cash and cash equivalents</b>			
Cash and cash equivalents at the beginning of the period		1,474,367	1,704,918
Effects of exchange rate changes on cash and cash equivalents		5,578	(21,794)
<b>Cash and cash equivalents at the end of the period</b>		<b>1,780,623</b>	<b>1,896,079</b>

The above consolidated interim statements of cash flows should be read in conjunction with the accompanying notes.

# LG Chem, Ltd. and Subsidiaries

## Notes to the Consolidated Interim Financial Statements

### September 30, 2017 and 2016 (Unaudited), and December 31, 2016

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#### 1. General Information

General information about LG Chem, Ltd. (the "Parent Company"), the controlling company in accordance with Korean IFRS 1110 *Consolidated Financial Statements*, and its subsidiaries (collectively referred to as the "Group") is as follows:

##### 1.1 The Parent Company

The Parent Company was spun off on April 1, 2001, from LG Chem Investment Ltd. (now LG Corp., formerly LG Chemical Ltd.).

As at September 30, 2017, the Parent Company has its manufacturing facilities in Yeosu, Daesan, Ochang, Cheongju, Ulsan, Naju, Iksan, Paju, Osong, Onsan and Gimcheon.

The Parent Company is authorized to issue 292 million shares of ordinary shares with par value of ₩5,000 per share. As at September 30, 2017, the Parent Company has issued 70,592,343 ordinary shares (₩352,962 million) and 7,688,800 preferred shares (₩38,444 million). The largest shareholder of the Parent Company is LG Corp., which owns 33.34% of the Parent Company's ordinary shares. Preferred shareholders have no voting rights but are entitled to receive dividends at a rate 1% more than those paid to ordinary shareholders.

##### 1.2 Business Overview

The Group is engaged in Basic materials & Chemicals business, Energy solutions, IT & Electronics materials and Advanced materials business, and also engaged in Life Sciences business acquired through a merger with LG Life Sciences, Ltd. in January 2017. In April 2016, the Parent Company acquired 100% shares of FarmHannong Co., Ltd., which is engaged to manufacture crop protection products, seeds, fertilizers and others.

The Basic materials & Chemicals business includes production of olefin petrochemicals, such as ethylene, propylene, butadiene from Naphtha, and aromatic petrochemicals such as benzene. It also includes production of synthetic resin and synthetic components from olefin, and aromatic petrochemicals. This business bears characteristics of a large-volume process industry. The Group's major products are PE, PP, BPA, ABS, EP, PVC, plasticizers, acrylic, SAP, synthetic rubber, a special resin, and others.

The Energy solutions business manufactures and supplies batteries ranging from IT & New application batteries for mobile phones and laptop computers, to automotive batteries for electric vehicles and ESS batteries. Demand of small sized batteries for new applications such as electric tools and electric driving devices as well as traditional IT devices is increasing recently and the automotive battery business is also expected to expand rapidly due to an increasing demand of the batteries in associated with enhanced environment regulation in developed countries. Demand for ESS is expanding with an increasing importance of efficient usage of electricity and generation of renewable energy.

The IT & Electronics material business manufactures and supplies various kinds of IT materials such as polarizer, Glass Substrate, OLED film, semiconductor materials and RO membranes, which will be the next growth engine for future. Advanced materials business manufactures and supplies display and battery materials for LCD Photoresist, OLED materials, battery materials and others.

The Life Sciences business manufactures and supplies pharmaceutical products, such as quinolone antibiotics 'Factive', human growth hormone 'Eutropin', diabetes drug 'Zemiglo', Bovine Somatotropin 'Boostin', hyaluronic acid filler 'YVOIRE' and others, as well as fine chemical products, such as herbicide for rice farming and others.

# LG Chem, Ltd. and Subsidiaries

## Notes to the Consolidated Interim Financial Statements

### September 30, 2017 and 2016 (Unaudited), and December 31, 2016

FarmHannong Co., Ltd., subsidiary of the Parent Company, manufactures and sells crop protection products, seeds, fertilizers and others. The crop protection business provides high value products such as environmentally-friendly pesticide. The fertilizer business leads developing a next generation fertilizers such as eco-friendly organic and functional fertilizers, and potting soil. The seed business puts priority on retaining various genetic resources and developing rare breeds with high profit in order to remain competitive in a future food industry.

### 1.3 Consolidated Subsidiaries, Associates and Joint Ventures

	September 30, 2017			
	Percentage of ownership (%)	Business location	Closing month	Business activities
<b>Consolidated subsidiaries</b>				
Ningbo LG Yongxing Chemical Co., Ltd. <sup>1</sup>	75	China	December	ABS/SBL manufacturing and sales
Ningbo Zhenhai LG Yongxing Trade Co., Ltd. <sup>1</sup>	75	China	December	ABS sales
LG Chem HK Ltd.	100	Hong Kong	December	Sales and trading
LG Chem America, Inc.	100	USA	December	Sales and trading
LG Chemical India Pvt. Ltd. <sup>2</sup>	100	India	December	Synthetic resin manufacturing and sales
LG Polymers India Pvt. Ltd. <sup>2</sup>	100	India	December	PS manufacturing
LG Chemical (Guangzhou) Engineering Plastics Co., Ltd.	100	China	December	EP manufacturing and sales
LG Chem (Nanjing) Information & Electronics Materials Co., Ltd. <sup>3</sup>	100	China	December	Battery/ Polarizer Manufacturing and sales
LG Chem (Taiwan), Ltd.	100	Taiwan	December	Polarizer manufacturing and sales
LG Chem Display Materials (Beijing) Co., Ltd.	100	China	December	Polarizer manufacturing
Tianjin LG Bohai Chemical Co., Ltd. <sup>4</sup>	75	China	December	PVC, VCM, EDC manufacturing and sales
Tianjin LG BOTIAN Chemical Co., Ltd. <sup>4</sup>	56	China	December	SBS manufacturing and sales
LG Chem (China) Investment Co., Ltd. <sup>5</sup>	100	China	December	China holding company
LG Chem (Tianjin) Engineering Plastics Co., Ltd.	100	China	December	ABS/EP manufacturing and sales
LG Chem Europe GmbH	100	Germany	December	Sales and trading
LG Chem Poland Sp. z o.o.	100	Poland	December	Polarizer manufacturing
LG Chem Michigan Inc.	100	USA	December	Automotive battery research and manufacturing
LG Chem Power Inc.	100	USA	December	Automotive battery research
LGC Petrochemical India Private Ltd.	100	India	December	Synthetic resin manufacturing and sales
Haengboknuri Co., Ltd.	100	Korea	December	Facility management and general cleaning
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	100	Turkey	December	Sales and trading
LG Chem Japan Co., Ltd.	100	Japan	December	Sales and trading
LG NanoH2O, Inc. <sup>6</sup>	100	USA	December	Water processing membrane research and manufacturing
NanoH2O Singapore Private Ltd. <sup>6</sup>	100	Singapore	December	Water processing membrane research and manufacturing
NanoH2O (Jiangsu) Water Processing Technology Co. Ltd.	100	China	December	Water processing membrane research and manufacturing
Nanjing LG Chem New Energy Battery Co., Ltd. <sup>7</sup>	50	China	December	Automotive battery manufacturing and sales
LG Chem (Chongqing) Engineering Plastics Co., Ltd.	100	China	December	EP manufacturing and sales
LG Chem Wroclaw Energy sp. z o.o. <sup>8</sup>	100	Poland	December	Automotive battery research and manufacturing



# LG Chem, Ltd. and Subsidiaries

## Notes to the Consolidated Interim Financial Statements

### September 30, 2017 and 2016 (Unaudited), and December 31, 2016

LG Chem(HUIZHOU) Petrochemical Co., Ltd.	70	China	December	ABS manufacturing and sales
FarmHannong Co., Ltd. <sup>9</sup>	100	Korea	December	Agricultural pesticide manufacturing
Cecel.Co., Ltd. <sup>9</sup>	71	Korea	December	Biologicals manufacturing
Agrotech Co., Ltd. <sup>9</sup>	100	Korea	December	Agricultural pesticide manufacturing
FarmHwaong Co., Ltd. <sup>9,10</sup>	58	Korea	December	Vegetables and fruit farming
Dongbu Farm Hannong (Heilongjiang) Chemical Co., Ltd. <sup>9</sup>	100	China	December	Agricultural pesticide manufacturing
LG Life Sciences India Pvt. Ltd. <sup>11</sup>	100	India	December	Pharmaceutical products sales
LG Life Sciences (Beijing) Co., Ltd. <sup>11</sup>	100	China	December	Pharmaceutical products sales
LG Life Sciences (Thailand) Ltd. <sup>11</sup>	100	Thailand	December	Pharmaceutical products sales
LG Life Sciences America Inc. <sup>11</sup>	100	USA	December	Agricultural pesticide sales
Sarangnuri Ltd. <sup>11</sup>	100	Korea	December	Pharmaceutical products packaging
LG Chem Hai Phong Vietnam Company Ltd. <sup>12</sup>	100	Vietnam	December	Polarizer manufacturing
<b>Associates</b>				
LG Holdings (HK) Ltd.	26	Hong Kong	December	Sales and trading
TECWIN Co., Ltd.	21	Korea	December	Environment solution and Construction of chemical plant
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA. <sup>13</sup>	100	Brazil	December	Sales and trading
LG Chem Malaysia SDN.BHD. <sup>13</sup>	100	Malaysia	December	Sales and trading
LG Fuel Cell Systems Inc. <sup>14</sup>	26	USA	December	Power fuel cell research
FJ Composite Material Co., Ltd. <sup>15</sup>	33	Japan	May	Heat diffuser research and manufacturing
WUXI CL New Energy Technology Ltd. <sup>16</sup>	30	China	December	ESS manufacturing
LG Life Sciences Poland Pvt, Ltd. <sup>11,13</sup>	100	Poland	December	Pharmaceutical products sales
<b>Joint ventures</b>				
LG VINA Chemical Co., Ltd.	40	Vietnam	December	DOP production and sales
HL Greenpower Co., Ltd.	49	Korea	December	Battery manufacturing for electric automobile
SEETEC Co., Ltd.	50	Korea	December	Plant utility and distribution, research assistance service

<sup>1</sup> As at September 30, 2017, Ningbo LG Yongxing Chemical Co., Ltd. owns 100% of Ningbo Zhenhai LG Yongxing Trade Co., Ltd.'s shares.

<sup>2</sup> As at September 30, 2017, LG Chemical India Pvt. Ltd. owns 100% of LG Polymer India Pvt. Ltd.'s shares.

<sup>3</sup> During the period ended September 30, 2017, the Parent Company acquired additional shares of LG Chem (Nanjing) Information & Electronics Materials Co., Ltd. for ₩85,812 million.

<sup>4</sup> As at September 30, 2017, Tianjin LG Bohai Chemical Co., Ltd. owns 20.30% of Tianjin LG BOTIAN Chemical Co., Ltd.'s shares.

<sup>5</sup> During the period ended September 30, 2017, the Parent Company acquired additional shares of LG Chem (China) Investment Co., Ltd. for ₩28,061 million.

<sup>6</sup> As at September 30, 2017, LG NanoH2O, Inc. owns 100% of NanoH2O Singapore Private Ltd.'s shares.

<sup>7</sup> Although the Parent Company owns less than 50% of the voting rights of Nanjing LG Chem New Energy Battery Co., Ltd., the Parent Company is considered to have control over the investee as the Parent Company can exercise the majority voting rights in its decision-making process in accordance with the shareholders' agreement. During the period ended September 30, 2017, the Parent Company acquired additional shares of Nanjing LG Chem New Energy Battery Co., Ltd. for ₩13,960 million.

<sup>8</sup> During the period ended September 30, 2017, the Parent Company acquired additional shares of LG Chem Wroclaw Energy sp. z o.o. for ₩66,490 million.

# LG Chem, Ltd. and Subsidiaries

## Notes to the Consolidated Interim Financial Statements

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<sup>9</sup> As at September 30, 2017, FarmHannong Co., Ltd. owns 100% of Agrotech Co., Ltd., Dongbu Farm Hannong (Heilongjiang) Chemical Co., Ltd., and also holds 71.05% of Cecel Co., Ltd., and 57.87% of FarmHwaong Co., Ltd. During the period ended September 30, 2017, FarmHannong Co., Ltd. disposed of a subsidiary, FarmBiotec Co., Ltd.

<sup>10</sup> As at September 30, 2017, FarmHwaong Co., Ltd.'s assets and liabilities are classified as assets and liabilities held for sale (Note 35).

<sup>11</sup> During the period ended September 30, 2017, the Parent Company acquired subsidiaries of LG Life Sciences, Ltd. due to the merger with LG Life Sciences, Ltd.

<sup>12</sup> During the period ended September 30, 2017, the Parent Company newly acquired 100% shares of LG Chem Hai Phong Vietnam Company Ltd. for ₩150 million.

<sup>13</sup> Classified as an investment in associate due to its small size.

<sup>14</sup> During the period ended September 30, 2017, the Parent Company newly acquired shares of LG Fuel Cell Systems Inc. for ₩24,527 million.

<sup>15</sup> During the period ended September 30, 2017, the Parent Company newly acquired 33.25% shares of FJ Composite Material Co., Ltd. for ₩3,015 million.

<sup>16</sup> During the period ended September 30, 2017, the Parent Company newly acquired 30% shares of WUXI CL New Energy Technology Ltd. for ₩1,178 million.

#### 1.4 Summarized Financial Information of Subsidiaries, Associates and Joint Ventures

Summarized financial information (before elimination of intercompany transactions and adjustments for differences in accounting policies) of subsidiaries, associates and joint ventures is as follows:

(in millions of Korean won)

	September 30, 2017			Nine month period ended September 30, 2017	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
<b>Subsidiaries</b>					
Ningbo LG Yongxing Chemical Co., Ltd.	977,018	459,808	517,210	1,554,130	163,504
Ningbo Zhenhai LG Yongxing Trade Co., Ltd.	9,307	5,850	3,457	32,867	674
LG Chem HK Ltd.	69,715	51,474	18,241	368,932	376
LG Chem America, Inc.	218,902	199,329	19,573	595,292	738
LG Chemical India Pvt. Ltd.	32,788	24	32,764	-	29
LG Polymers India Pvt. Ltd.	106,350	25,968	80,382	186,187	10,308
LG Chemical (Guangzhou) Engineering Plastics Co., Ltd.	101,845	33,287	68,558	148,208	2,060
LG Chem (Nanjing) Information & Electronics Materials Co., Ltd.	2,398,915	1,452,938	945,977	2,059,162	87,407
LG Chem (Taiwan), Ltd.	134,742	67,240	67,502	147,279	5,414
LG Chem Display Materials (Beijing) Co., Ltd.	42,119	14,365	27,754	52,031	1,776
Tianjin LG Bohai Chemical Co., Ltd.	328,709	248,006	80,703	385,535	30,711
Tianjin LG BOTIAN Chemical Co., Ltd.	56,053	57,795	(1,742)	126,829	664
LG Chem (China) Investment Co., Ltd.	277,100	130,406	146,694	44,658	4,221
LG Chem (Tianjin) Engineering Plastics Co., Ltd.	64,848	17,700	47,148	68,241	(796)
LG Chem Europe GmbH	244,664	213,293	31,371	389,639	6,131
LG Chem Poland Sp. z o.o.	58,940	24,358	34,582	70,479	1,892
LG Chem Michigan Inc.	232,794	134,248	98,546	173,161	18,701
LG Chem Power Inc.	19,919	4,443	15,476	32,626	3,327
LGC Petrochemical India Private Ltd.	2,577	561	2,016	3,185	288
Haengboknuri Co., Ltd.	2,176	996	1,180	5,098	20
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	6,140	4,585	1,555	18,753	254
LG Chem Japan Co., Ltd.	3,482	310	3,172	4,286	466
LG NanoH2O, Inc. <sup>1</sup>	12,617	3,345	9,272	11,767	1,919
NanoH2O (Jiangsu) Water Processing Technology Co. Ltd.	4,409	1,236	3,173	-	(1,937)

**LG Chem, Ltd. and Subsidiaries**  
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Nanjing LG Chem New Energy Battery Co., Ltd.	422,722	361,650	61,072	154,405	2,920
LG Chem (Chongqing) Engineering Plastics Co., Ltd.	38,441	7,511	30,930	17,429	(2,832)
LG Chem Wroclaw Energy sp. z o.o.	213,595	141,888	71,707	11,529	(4,560)
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	311,003	228,092	82,911	274,117	11,810
FarmHannong Co., Ltd. <sup>1</sup>	1,185,041	632,449	552,592	536,369	25,144
LG Life Sciences India Pvt. Ltd.	5,867	4,183	1,684	8,586	(600)
LG Life Sciences (Beijing) Co., Ltd.	1,212	10	1,202	593	(24)
LG Life Sciences (Thailand) Ltd.	7,915	4,446	3,469	14,969	1,805
LG Life Sciences America Inc.	9,314	8,462	852	12,420	382
Sarangnuri Ltd.	210	41	169	203	50
LG Chem Hai Phong Vietnam Company Ltd.	1,254	1,150	104	-	(47)

**Associates**

LG Holdings (HK) Ltd.	321,610	44,717	276,893	35,734	11,574
TECWIN Co., Ltd.	64,015	25,735	38,280	-	-
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	125	249	(124)	-	-
LG Chem Malaysia SDN.BHD.	262	24	238	-	-
LG Fuel Cell Systems Inc.	25,140	5,793	19,347	1,851	(31,800)
FJ Composite Material Co., Ltd.	7,655	3,029	4,626	569	(369)
WUXI CL New Energy Technology Ltd.	3,727	(50)	3,777	-	(336)
LG Life sciences Poland Pvt, Ltd.	124	72	52	139	(17)

**Joint ventures**

LG VINA Chemical Co., Ltd.	19,109	10,584	8,525	39,349	1,561
HL Greenpower Co., Ltd.	190,881	151,728	39,153	317,924	4,629
SEETEC Co., Ltd.	337,945	40,135	297,810	370,385	11,735

<sup>1</sup> Included its subsidiaries' financial information from an intermediate parent perspective and not applied adjustments of a fair value evaluation due to the business combination in the consolidated financial statements.

(in millions of Korean won)

	December 31, 2016			Nine month period ended September 30, 2016	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the period
<b>Subsidiaries</b>					
Ningbo LG Yongxing Chemical Co., Ltd.	676,217	249,084	427,133	1,094,367	49,223
Ningbo Zhenhai LG Yongxing Trade Co., Ltd.	8,464	5,687	2,777	24,040	515
LG Chem HK Ltd.	108,970	90,142	18,828	374,648	698
LG Chem America, Inc.	176,522	156,627	19,895	479,060	2,031
LG Chemical India Pvt. Ltd.	32,761	6	32,755	-	8
LG Polymers India Pvt. Ltd.	89,187	18,073	71,114	154,327	9,354
LG Chemical (Guangzhou) Engineering Plastics Co., Ltd.	112,309	45,195	67,114	110,149	4,829
LG Chem (Nanjing) Information & Electronics Materials Co., Ltd.	2,357,476	1,593,091	764,385	1,629,011	(33,424)
LG Chem (Taiwan), Ltd.	133,777	66,712	67,065	145,996	4,006
LG Chem Display Materials (Beijing) Co., Ltd.	37,473	9,910	27,563	43,091	1,867
Tianjin LG Bohai Chemical Co., Ltd.	311,868	262,247	49,621	316,887	(52,155)
Tianjin LG BOTIAN Chemical Co., Ltd.	54,947	57,176	(2,229)	101,218	10,863
LG Chem (China) Investment Co., Ltd.	243,675	129,390	114,285	38,637	5,560
LG Chem (Tianjin) Engineering Plastics Co., Ltd.	65,316	17,080	48,236	67,798	3,152
LG Chem Europe GmbH	177,371	154,464	22,907	314,630	8,649
LG Chem Poland Sp. z o.o.	50,133	20,220	29,913	58,060	2,806

**LG Chem, Ltd. and Subsidiaries**  
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LG Chem Michigan Inc.	245,278	161,224	84,054	151,158	34,422
LG Chem Power Inc.	20,042	7,253	12,789	29,581	4,469
LGC Petrochemical India Private Ltd.	2,153	398	1,755	3,036	342
Haengboknuri Co., Ltd.	1,950	790	1,160	4,372	7
LG CHEM TK Kimya SANAYI VE TIC. Ltd. STI.	4,139	2,757	1,382	16,774	285
LG Chem Japan Co., Ltd.	3,115	368	2,747	4,096	438
LG NanoH2O, Inc. <sup>1</sup>	11,318	3,565	7,753	11,518	(80)
NanoH2O (Jiangsu) Water Processing Technology Co. Ltd.	6,463	1,242	5,221	-	(29)
Nanjing LG Chem New Energy Battery Co., Ltd.	298,201	254,678	43,523	65,265	(8,288)
LG Chem (Chongqing) Engineering Plastics Co., Ltd.	41,390	35,957	5,433	4,601	(1,773)
LG Chem Wroclaw Energy sp. z o.o.	18,009	9,725	8,284	-	-
LG Chem(HUIZHOU) Petrochemical Co., Ltd.	334,007	262,755	71,252	174,267	(18,314)
FarmHannong Co., Ltd. <sup>1</sup>	1,129,257	601,749	527,508	275,122	(87,266)
<b>Associates</b>					
LG Holdings (HK) Ltd.	379,243	98,434	280,809	26,220	13,642
TECWIN Co., Ltd.	64,015	25,735	38,280	-	-
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	89	112	(23)	-	-
LG Chem Malaysia SDN.BHD.	226	17	209	-	-
LG Fuel Cell Systems Inc.	59,468	74,366	(14,898)	1,787	(35,266)
<b>Joint ventures</b>					
LG VINA Chemical Co., Ltd.	19,786	10,121	9,665	39,469	1,715
HL Greenpower Co., Ltd.	151,411	116,896	34,515	118,634	(1,694)
SEETEC Co., Ltd.	351,603	45,529	306,074	348,379	12,440

<sup>1</sup> Included its subsidiaries' financial information from an intermediate parent perspective and not applied adjustments of a fair value evaluation due to the business combination in the consolidated financial statements.

### 1.5 Changes in Scope for Consolidation

Subsidiaries newly included in the consolidation for the nine-month period ended September 30, 2017, are as follows:

Subsidiary	Reason
LG Life Sciences India Pvt. Ltd.	Business combination
LG Life Sciences (Beijing) Co., Ltd.	Business combination
LG Life Sciences (Thailand) Ltd.	Business combination
LG Life Sciences America Inc.	Business combination
Sarangnuri Ltd.	Business combination
LG Chem Hai Phong Vietnam Company Ltd.	Newly established

Subsidiaries excluded from the consolidation for the nine-month period ended September 30, 2017, are as follows:

Subsidiary	Reason
FarmBiotec Co., Ltd.	Disposed interests of subsidiary

# LG Chem, Ltd. and Subsidiaries

## Notes to the Consolidated Interim Financial Statements

### September 30, 2017 and 2016 (Unaudited), and December 31, 2016

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## 2. Summary of Significant Accounting Policies

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

### 2.1 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 interim financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

The Group's consolidated interim financial statements for the nine-month period ended September 30, 2017, have been prepared in accordance with Korean IFRS 1034 *Interim Financial Reporting*. These consolidated interim financial statements have been prepared in accordance with Korean IFRS which is effective or early adopted as at September 30, 2017.

#### (a) New and amended standards adopted by the Group

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2017. The adoption of these amendments did not have any impact on the current period or any prior period and is not likely to affect future periods.

- Amendments to Korean IFRS 1007 *Statement of Cash Flows*
- Amendments to Korean IFRS 1012 *Income Tax*
- Amendments to Korean IFRS 1112 *Disclosure of Interests in Other Entities*

#### (b) New standards and interpretations not yet adopted by the Group

Certain new accounting standards and interpretations that have been published that are not mandatory for annual reporting period commencing January 1, 2017 and have not been early adopted by the Group are set out below.

- Korean IFRS 1109 *Financial Instruments*

The new standard for financial instruments issued on September 25, 2015 are 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.

# LG Chem, Ltd. and Subsidiaries

## Notes to the Consolidated Interim Financial Statements

### September 30, 2017 and 2016 (Unaudited), and December 31, 2016

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Korean IFRS 1109 *Financial Instruments* 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 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 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.

With the implementation of Korean IFRS 1109 the Group is preparing for internal management process and is beginning to adjust accounting system for financial instruments reporting. Also, the Group is analyzing the financial effects of applying the standard.

#### - Korean IFRS 1115 *Revenue from Contracts with Customers*

The Group will apply Korean IFRS 1115 *Revenue from Contracts with Customers* issued on November 6, 2015 for annual reporting periods beginning on or after January 1, 2018. Earlier adoption is permitted under Korean IFRS. 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 will apply Korean IFRS 1115 *Revenue from Contracts with Customers* within annual reporting periods beginning on or after January 1, 2018.

The new standard is based on the principle that revenue is recognized when control of a good or service transfers to a customer so the notion of control replaces the existing notion of risks and rewards. A new five-step process must be applied before revenue from contract with customer can be recognized:

- Identify contracts with customers
- Identify the separate performance obligation
- Determine the transaction price of the contract
- Allocate the transaction price to each of the separate performance obligations, and
- Recognize the revenue as each performance obligation is satisfied.

As at September 30, 2017, the Group is preparing for internal management process and is beginning to adjust accounting system in relation to implementation of Korean IFRS 1115. Also, the Group is analyzing the financial effects of applying the standard.

- Amendments to Korean IFRS 1028 *Investments in Associates and Joint Ventures*
- Amendments to Korean IFRS 1102 *Share-based Payment*
- Enactments to Interpretation 2122 *Foreign Currency Transactions and Advance Consideration*

## 2.2 Accounting Policies

Significant accounting policies and method of computation used in the preparation of the consolidated interim financial statements are consistent with those of the consolidated financial statements for the year ended December 31, 2016, except for the changes due to the application of amendment and enactments of standards described in Note 2.1 (a) and the one described below.

**LG Chem, Ltd. and Subsidiaries**  
**Notes to the Consolidated Interim Financial Statements**  
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2.2.1 Income tax expense

Income tax expense for the interim period is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year. The estimated average annual tax rate is applied to the pre-tax income.

**3. Financial risk Management**

**3.1 Financial Risk Factors**

The Group's activities expose it to a variety of financial risks: market risk, credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the financial performance of the Group. The Group uses derivative financial instruments to hedge certain risk exposures.

Risk management is carried out by the Group's finance team under policies approved by the Corporate Management Committee. The finance team identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units. The Corporate Management Committee reviews and approves written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, and credit risk, use of derivative financial instruments and non-derivative financial instruments, investment of excess liquidity.

(1) Market risk

1) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from foreign currency exposures, primarily with respect to the US dollar. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities.

Management has set up a policy to require group companies to manage their foreign exchange risk against their functional currency. The Group manages maximum loss for currency risk exposures within acceptable range by using currency risk management model and hires employees who are exclusively responsible for currency risk management.

The Group has certain investments in foreign operations, whose net assets are exposed to foreign currency translation risk. Currency exposure arising from the net assets of the Group's foreign operations is managed primarily through borrowings denominated in the relevant foreign currencies.

As at September 30, 2017 and December 31, 2016, the Group's monetary assets and liabilities denominated in currencies other than its functional currency, are as follows:

*(in millions of Korean won)*

	<b>September 30, 2017</b>		<b>December 31, 2016</b>	
	<b>Assets</b>	<b>Liabilities</b>	<b>Assets</b>	<b>Liabilities</b>
USD	2,306,917	1,787,437	1,667,146	2,263,717
EUR	248,328	19,391	78,532	90,506
JPY	23,169	112,042	29,169	113,351
CNY and others	65,468	3,254	33,534	2,187

**LG Chem, Ltd. and Subsidiaries**  
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As at September 30, 2017 and December 31, 2016, if the Group's functional currency had weakened / strengthened by 10% against the US dollar with all other variables held constant, profit before income tax would have been affected as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>		<b>December 31, 2016</b>	
	<b>10% Increase</b>	<b>10% Decrease</b>	<b>10% Increase</b>	<b>10% Decrease</b>
USD	51,948	(51,948)	(59,657)	59,657

The above sensitivity analysis has been performed for monetary assets and liabilities denominated in foreign currencies other than the Group's functional currency at the end of the reporting period.

2) Price risk

The Group is exposed to equity securities price risk arises from investments held by the Group that one classified as available-for-sale in the consolidated statement of financial position. The Group's equity investments are publicly traded and are related to the KOSPI index.

The table below summarizes the impact of increases/decreases of the listed stock price index on the Group's equity before tax effects as at September 30, 2017 and December 31, 2016. The analysis is based on the assumption that the equity index has increased/decreased by 10% with all other variables held constant, and that all the Group's equity instruments moved in line with the index.

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>		<b>December 31, 2016</b>	
	<b>10% Increase</b>	<b>10% Decrease</b>	<b>10% Increase</b>	<b>10% Decrease</b>
KOSPI	698	(698)	1,134	(1,134)

3) Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from deposits and borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises through floating rate deposits and borrowings. The objective of interest rate risk management lies in maximizing corporate value by minimizing uncertainty in interest rates fluctuations and net interest expense.

The Group adequately minimizes risks from interest rate fluctuations through various policies, such as sharing excess cash within the Group (internal cash sharing) to minimize external borrowings, avoiding high rate borrowings, reforming capital structure, managing an appropriate ratio of fixed rate borrowings and floating rate borrowings, monitoring a fluctuation of domestic and foreign interest rates daily, weekly and monthly, establishing alternatives, and balancing floating rate short-term borrowings with floating rate deposits.

The table below summarizes the impact of increases/decreases of interest rate on the Group's post-tax profit for the nine-month periods ended September 30, 2017 and 2016, and on equity as at September 30, 2017 and 2016. The analysis is based on the assumption that the interest rate has increased/decreased by 1% (100 basis points) with all other variables held constant.



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<i>(in millions of Korean won)</i>	<b>Impact on post-tax profit</b>		<b>Impact on equity</b>	
	<b>2017</b>	<b>2016</b>	<b>2017</b>	<b>2016</b>
Increase	(14,457)	(19,077)	(14,457)	(19,077)
Decrease	14,457	19,077	14,457	19,077

(2) Credit risk

Credit risk is managed on the Group basis. Credit risk arises from cash and cash equivalents, derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding receivables and committed transactions.

The maximum exposure to credit risk as at September 30, 2017 and December 31, 2016, is as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>		
	<b>Amount before provision</b>	<b>Provision for impairment</b>	<b>Book amount (maximum exposure)</b>
Loans and receivables (excluding cash on hand)	7,282,660	(10,934)	7,271,726
<b>Total</b>	<b>7,282,660</b>	<b>(10,934)</b>	<b>7,271,726</b>

<i>(in millions of Korean won)</i>	<b>December 31, 2016</b>		
	<b>Amount before provision</b>	<b>Provision for impairment</b>	<b>Book amount (maximum exposure)</b>
Loans and receivables (excluding cash on hand)	6,233,784	(13,594)	6,220,190
<b>Total</b>	<b>6,233,784</b>	<b>(13,594)</b>	<b>6,220,190</b>

The Group has established the following policies and procedures to manage credit risks.

To manage credit risks relating to trade receivables, the Group evaluates the credit rating of customers and determines credit limit for each customer based on the information provided by credit rating agencies and other available financial information before commencing business with customers. The credit risks relating to trade receivables are also mitigated by insurance contracts, collaterals as well as payment guarantees.

The Group has entered into export insurance contracts with Korea Trade Insurance Corporation to mitigate credit risks relating to export trade receivables to overseas customers. The Group is also provided with collaterals by customers depending on their credit rating or payment guarantees from the customers' financial institutions as necessary.

The Group has deposited its cash and cash equivalents, and other long-term deposits in several financial institutions, such as Woori Bank and others. The Group has also entered into derivative contracts with several financial institutions. The Group maintains business relationship with those financial institutions with high credit ratings evaluated by independent credit rating agencies and accordingly, credit risks associated with these financial institutions are limited.

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(3) Liquidity risk

Finance team of the Group monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining sufficient headroom on its undrawn committed borrowing facilities at all times so that the Group does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. The Group's liquidity management policy involves projecting cash flows in major currencies and considering the level of liquid assets necessary to meet these, monitoring balance sheet liquidity ratios against internal and external regulatory requirements and maintaining debt financing plans.

The table below analyzes the Group's non-derivative financial liabilities into relevant maturity groupings based on the remaining period at the reporting period to the contractual maturity date. Cash flows presented below are gross cash flows before discount, and includes cash flows for interests.

(in millions of Korean won)

	<b>September 30, 2017</b>			
	<b>Less than 1 year</b>	<b>Between 1-2 years</b>	<b>Between 2-5 years</b>	<b>Over 5 years</b>
Borrowings (excluding finance lease liabilities)	1,361,984	601,364	1,167,929	330,942
Finance lease liabilities	5,289	5,177	15,532	13,077
Trade and other payables	2,870,556	6,926	1,659	171
<b>Total</b>	<b>4,237,829</b>	<b>613,467</b>	<b>1,185,120</b>	<b>344,190</b>

(in millions of Korean won)

	<b>December 31, 2016</b>			
	<b>Less than 1 year</b>	<b>Between 1-2 years</b>	<b>Between 2-5 years</b>	<b>Over 5 years</b>
Borrowings (excluding finance lease liabilities)	2,239,782	373,198	258,839	84,402
Finance lease liabilities	5,000	5,000	15,000	15,000
Trade and other payables	2,694,857	12,307	1,784	216
<b>Total</b>	<b>4,939,639</b>	<b>390,505</b>	<b>275,623</b>	<b>99,618</b>

**LG Chem, Ltd. and Subsidiaries**  
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**3.2 Capital Risk Management**

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern, so the Group can continue to provide returns for shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to reduce the cost of capital.

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

The gearing ratio and debt-to-equity ratio as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won, except for ratios)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
Total borrowings (Note 14) (A)	3,276,406	2,890,641
Less: cash and cash equivalents (B)	<u>(1,780,623)</u>	<u>(1,474,367)</u>
Net debt (C=A+B)	<u>1,495,783</u>	<u>1,416,274</u>
Total liabilities (D)	7,585,752	6,436,093
Total equity (E)	<u>16,121,798</u>	<u>14,050,967</u>
Total capital (F=C+E)	<u>17,617,581</u>	<u>15,467,241</u>
Gearing ratio (C/F)	8.5%	9.2%
Debt-to-equity ratio (D/E)	47.1%	45.8%

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**3.3 Fair Value**

(1) Carrying amount and fair value of financial instruments by category as at September 30, 2017 and December 31, 2016, are as follows:

(in millions of Korean won)

	<b>September 30, 2017</b>		<b>December 31, 2016</b>	
	<b>Carrying amount</b>	<b>Fair value</b>	<b>Carrying amount</b>	<b>Fair value</b>
<b>Financial assets (current)</b>				
Cash and cash equivalents	1,780,623	1	1,474,367	1
Deposits held by financial institutions	619,498	1	732,871	1
Trade receivables	4,522,820	1	3,533,699	1
Other receivables (excluding deposits held by financial institutions)	216,951	1	246,156	1
<b>Financial assets (non-current)</b>				
Deposits held by financial institutions	64,352	1	64,485	1
Other receivables (excluding deposits held by financial institutions)	67,528	1	168,667	1
Other non-current financial assets (carried at cost)	16,337	2	11,829	2
Other non-current financial assets (carried at fair value)	8,194	8,194	11,619	11,619
<b>Financial liabilities (current)</b>				
Trade and other payables	2,870,556	1	2,694,857	1
Current borrowings (excluding finance lease liabilities)	1,356,181	1	2,207,755	1
Current finance lease liabilities	5,208	1	4,886	1
Other current liabilities (dividends payable)	-	1	12	1
<b>Financial liabilities (non-current)</b>				
Non-current borrowings (excluding finance lease liabilities)	1,885,368	1,886,986	647,728	1
Non-current finance lease liabilities	29,649	31,348	30,272	31,411
Other non-current payables	8,756	1	14,307	1

<sup>1</sup> These financial assets and liabilities are not included in the disclosure above as their carrying amount is a reasonable approximation of the fair value.

<sup>2</sup> All other non-current financial assets of the Group consist of available-for-sale equity securities. Certain equity securities are measured at cost (September 30, 2017: ₩16,337 million, December 31, 2016: ₩11,829 million) as the range of reasonable fair value estimates is significant and the probabilities of the various estimates cannot be reasonably assessed. These are not included in the disclosure above (Note 8). The Group does not have any plans to dispose of these available-for-sale equity securities in the near future.

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(2) Fair value for measurement and disclosure are determined based on the following method:

Fair values of financial liabilities(non-current) are based on cash outflows discounted using Korean won currency note yield in the same credit grade with the Parent Company (AA+), and the applied discount rates as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in percentage)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
Discount rate	1.61%~2.76%	1.63%~2.57%

(3) Fair value hierarchy

Items that are measured at fair value or for which the fair value is disclosed are categorized by the fair value hierarchy levels, and the defined levels are as follows:

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

Fair value hierarchy classifications of the financial instruments that are measured at fair value or its fair value is disclosed as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>			
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<b>Financial assets/liabilities measured at fair value</b>				
Other non-current financial assets (carried at fair value)	8,194	-	-	8,194
<b>Financial assets/liabilities not measured at fair value</b>				
Non-current borrowings (excluding finance lease liabilities)	-	1,886,986	-	1,886,986
Non-current finance lease liabilities	-	31,348	-	31,348
 <i>(in millions of Korean won)</i>				
	<b>December 31, 2016</b>			
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<b>Financial assets/liabilities measured at fair value</b>				
Other non-current financial assets (carried at fair value)	11,619	-	-	11,619
<b>Financial assets/liabilities not measured at fair value</b>				
Non-current finance lease liabilities	-	31,411	-	31,411

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**4. 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.

Significant accounting estimates and assumptions applied in the preparation of these consolidated interim financial statements are consistent with those of the previous financial period, except for the estimates used to determine income tax expense.

**5. Financial Instruments by Category**

Categorizations of financial instruments as at September 30, 2017 and December 31, 2016, are as follows:

*(in millions of Korean won)*

Financial assets	September 30, 2017			
	Loans and receivables	Financial assets at fair value through profit or loss	Available-for-sale financial assets	Total
Cash and cash equivalents	1,780,623	-	-	1,780,623
Trade receivables	4,522,820	-	-	4,522,820
Other receivables	836,449	-	-	836,449
Other non-current receivables	131,880	-	-	131,880
Other non-current financial assets	-	-	24,531	24,531
<b>Total</b>	<b>7,271,772</b>	<b>-</b>	<b>24,531</b>	<b>7,296,303</b>

*(in millions of Korean won)*

Financial liabilities	September 30, 2017			
	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Other financial liabilities <sup>1</sup>	Total
Trade payables	-	1,755,874	-	1,755,874
Other payables	-	1,114,682	-	1,114,682
Borrowings (current)	-	1,346,882	14,507	1,361,389
Other non-current payables	-	8,756	-	8,756
Borrowings (non-current)	-	1,885,368	29,649	1,915,017
<b>Total</b>	<b>-</b>	<b>6,111,562</b>	<b>44,156</b>	<b>6,155,718</b>

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(in millions of Korean won)

Financial assets	December 31, 2016			
	Loans and receivables	Financial assets at fair value through profit or loss	Available-for-sale financial assets	Total
Cash and cash equivalents	1,474,367	-	-	1,474,367
Trade receivables	3,533,699	-	-	3,533,699
Other receivables	979,027	-	-	979,027
Other non-current receivables	233,152	-	-	233,152
Other non-current financial assets	-	-	23,448	23,448
<b>Total</b>	<b>6,220,245</b>	<b>-</b>	<b>23,448</b>	<b>6,243,693</b>

(in millions of Korean won)

Financial liabilities	December 31, 2016			
	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Other financial liabilities <sup>1</sup>	Total
Trade payables	-	1,723,252	-	1,723,252
Other payables	-	971,605	-	971,605
Borrowings (current)	-	1,759,033	453,608	2,212,641
Other current liabilities (dividends payable)	-	12	-	12
Other non-current payables	-	14,307	-	14,307
Borrowings (non-current)	-	647,728	30,272	678,000
<b>Total</b>	<b>-</b>	<b>5,115,937</b>	<b>483,880</b>	<b>5,599,817</b>

<sup>1</sup> Other financial liabilities are financial liabilities that are not subject to the categorizations such as finance lease liabilities, financial liabilities related to transfer transactions not qualified for derecognition.

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Net gains or losses on each category of financial instruments for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>2017</b>		<b>2016</b>	
	<b>Three months</b>	<b>Nine months</b>	<b>Three months</b>	<b>Nine months</b>
<b>Financial instruments at fair value through profit or loss</b>				
Loss on valuation/disposal (profit or loss)	-	-	-	(1,501)
<b>Hedging derivatives</b>				
Gain on disposal	-	170	-	-
<b>Available-for-sale financial assets</b>				
Interest income	-	5	-	91
Gain on disposal	-	-	-	18
Dividend income	127	331	-	-
<b>Loans and receivables</b>				
Interest income	7,730	21,531	9,423	30,616
Gain (loss) on foreign currency translation	14,587	39,760	(32,376)	(44,730)
Gain (loss) on foreign currency exchange	16,065	(131,972)	(95,008)	(95,140)
<b>Financial liabilities measured at amortized cost</b>				
Interest expense	(26,284)	(77,147)	(17,616)	(51,144)
Gain (loss) on foreign currency translation	(1,270)	23,645	16,399	(11,719)
Gain (loss) on foreign currency exchange	18,777	70,819	9,145	(11,981)
Loss on redemption of debentures	-	-	-	(3,031)
<b>Other financial liabilities</b>				
Interest expense	(64)	(5,411)	(3,152)	(8,813)
Gain (loss) on foreign currency translation	1,451	(723)	16,351	20,358
Gain (loss) on foreign currency exchange	(2,507)	65,329	45,549	45,281

**6. Cash and Cash Equivalents**

Details of cash and cash equivalents as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
Bank deposits and cash on hand	591,942	478,058
Deposits held by financial institutions and others	1,188,681	996,309
<b>Total</b>	<b>1,780,623</b>	<b>1,474,367</b>



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**7. Trade and Other Receivables**

Trade and other receivables, and its provisions for impairment as at September 30, 2017 and December 31, 2016, are as follows:

*(in millions of Korean won)*

	<b>September 30, 2017</b>		
	<b>Gross amount</b>	<b>Provision for impairment</b>	<b>Carrying amount</b>
Trade receivables <sup>1</sup>	4,531,714	(8,894)	4,522,820
Other current receivables	837,500	(1,051)	836,449
Other non-current receivables <sup>2</sup>	132,870	(990)	131,880
<b>Total</b>	<b>5,502,084</b>	<b>(10,935)</b>	<b>5,491,149</b>

*(in millions of Korean won)*

	<b>December 31, 2016</b>		
	<b>Gross amount</b>	<b>Provision for impairment</b>	<b>Carrying amount</b>
Trade receivables <sup>1</sup>	3,545,918	(12,219)	3,533,699
Other current receivables	979,412	(385)	979,027
Other non-current receivables <sup>2</sup>	234,142	(990)	233,152
<b>Total</b>	<b>4,759,472</b>	<b>(13,594)</b>	<b>4,745,878</b>

<sup>1</sup> As at September 30, 2017 and December 31, 2016, trade receivables transferred to financial institutions have been accounted for as a collateralized borrowing and financial assets not fully derecognized are as follows (Note 14):

	<b>Loans and receivables (trade receivables collateralized borrowings)</b>	
	<b>September 30, 2017</b>	<b>December 31, 2016</b>
Carrying amount of transferred assets	9,299	448,722
Carrying amount of related liabilities	(9,299)	(448,722)

<sup>2</sup> As at September 30, 2017, ₩594 million (December 31, 2016: ₩482 million) of other non-current receivables represents deposits which are restricted from withdrawal in connection with maintaining checking accounts.

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Details of other receivables as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
<b>Current</b>		
Non-trade receivables	153,156	195,087
Deposits held by financial institutions <sup>1</sup>	619,498	732,871
Accrued income	3,568	4,230
Loans	97	21,127
Guarantee deposits provided	60,130	25,712
	<u>836,449</u>	<u>979,027</u>
<b>Non-current</b>		
Non-trade receivables	6,983	16
Deposits held by financial institutions <sup>2</sup>	64,352	64,485
Loans	304	291
Guarantee deposits provided	60,241	168,360
	<u>131,880</u>	<u>233,152</u>
<b>Total</b>	<u>968,329</u>	<u>1,212,179</u>

<sup>1</sup> As at September 30, 2017, ₩1,338 million (December 31, 2016: ₩1,338 million) is pledged as a collateral for borrowings and others.

<sup>2</sup> As at September 30, 2017, ₩63,400 million (December 31, 2016: ₩63,400 million) is restricted from being withdrawn in relation to large, small and medium-sized companies cooperation agreement and others.

The aging analysis of trade and other receivables as at September 30, 2017 and December 31, 2016, is as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>		<b>December 31, 2016</b>	
	<b>Trade receivables</b>	<b>Other receivables</b>	<b>Trade receivables</b>	<b>Other receivables</b>
<b>Receivables not past due</b>	4,449,922	954,271	3,451,627	1,200,755
<b>Past due but not impaired</b>				
Up to 3 months	73,616	12,238	79,103	7,297
Between 3-6 months	54	492	1,984	1,178
Over 6 months	2,144	1,220	3,504	2,949
	<u>75,814</u>	<u>13,950</u>	<u>84,591</u>	<u>11,424</u>
<b>Impaired receivables</b>	5,978	2,149	9,700	1,375
<b>Total</b>	<u>4,531,714</u>	<u>970,370</u>	<u>3,545,918</u>	<u>1,213,554</u>

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Movements on the provision for impairment of trade and other receivables for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

(in millions of Korean won)

	<b>September 30, 2017</b>			
	<b>Trade receivables</b>		<b>Other receivables</b>	
	<b>Current</b>	<b>Non-current</b>	<b>Current</b>	<b>Non-current</b>
<b>Beginning balance</b>	12,219	-	385	990
Business combination (Note 34)	2,018	-	-	-
Impairment loss	-	-	666	-
Write-off	(357)	-	-	-
Reversals	(3,644)	-	-	-
Exchange differences	(1,342)	-	-	-
<b>Ending balance</b>	<b>8,894</b>	<b>-</b>	<b>1,051</b>	<b>990</b>

(in millions of Korean won)

	<b>December 31, 2016</b>			
	<b>Trade receivables</b>		<b>Other receivables</b>	
	<b>Current</b>	<b>Non-current</b>	<b>Current</b>	<b>Non-current</b>
<b>Beginning balance</b>	12,939	-	331	-
Business combination (Note 34)	1,237	-	21,644	990
Impairment loss	1,388	-	116	-
Write-off	(2,052)	-	(21,131)	-
Reversals	-	-	(486)	-
Exchange differences	(1,293)	-	(89)	-
<b>Ending balance</b>	<b>12,219</b>	<b>-</b>	<b>385</b>	<b>990</b>

As at September 30, 2017 and December 31, 2016, the carrying amounts of trade and other receivables are approximation of their fair values.

**8. Other Financial Assets**

Details of other financial assets as at September 30, 2017 and December 31, 2016, are as follows:

(in millions of Korean won)

	<b>September 30, 2017</b>	<b>December 31, 2016</b>
<b>Other financial assets</b>		
Available-for-sale financial assets	24,531	23,448
	<b>24,531</b>	<b>23,448</b>

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Changes in available-for-sale financial assets for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
<b>Beginning balance</b>	23,448	15,301
Business combination (Note 34)	2,652	2,270
Acquisitions / Transfer	2,191	3,463
Disposals	-	(44)
Impairment	(209)	-
Gain (loss) on valuation (before income tax effects)	(3,425)	2,392
Exchange differences	(126)	66
<b>Ending balance</b>	<u>24,531</u>	<u>23,448</u>

Available-for-sale financial assets consist of equity securities. The certain unlisted equity securities are measured at cost as the range of reasonable fair value estimates is wide and the probabilities of the various estimates cannot be reasonably assessed.

**9. Inventories**

Details of inventories as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>		
	<b>Gross amount</b>	<b>Valuation allowance</b>	<b>Carrying amount</b>
Merchandise	164,090	(11,165)	152,925
Finished / Semi-finished products	1,749,048	(72,130)	1,676,918
Work-in-process	11,669	-	11,669
Raw materials	893,486	(15,332)	878,154
Supplies	138,336	-	138,336
Materials-in-transit	329,312	-	329,312
<b>Total</b>	<u>3,285,941</u>	<u>(98,627)</u>	<u>3,187,314</u>

<i>(in millions of Korean won)</i>	<b>December 31, 2016</b>		
	<b>Gross amount</b>	<b>Valuation allowance</b>	<b>Carrying amount</b>
Merchandise	111,742	(2,438)	109,304
Finished / Semi-finished products	1,699,252	(84,326)	1,614,926
Work-in-process	785	-	785
Raw materials	822,044	(11,088)	810,956
Supplies	114,525	-	114,525
Materials-in-transit	314,695	-	314,695
<b>Total</b>	<u>3,063,043</u>	<u>(97,852)</u>	<u>2,965,191</u>

During the nine-month period ended September 30, 2017, the cost of inventories recognized as expense is included in 'cost of sales' amounted to ₩11,667,198 million (2016: ₩8,941,112 million).

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**10. Investments in Associates and Joint Ventures**

Changes in investments in associates and joint ventures for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

(in millions of Korean won)

	September 30, 2017								
	Beginning balance	Business combination	Acquisitions / Transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income of associates and joint ventures	Changes in ownership of associates	Others	Ending balance
LG VINA Chemical Co., Ltd.	3,874	-	-	(846)	624	(234)	-	-	3,418
HL Greenpower Co., Ltd.	16,927	-	-	-	2,254	-	-	5	19,186
LG Holdings (HK) Ltd.	74,843	-	-	-	3,010	(4,027)	-	-	73,826
TECWIN Co., Ltd.	7,214	-	-	-	794	-	-	-	8,008
	148,333								
SEETEC Co., Ltd.	3	-	-	(10,000)	6,794	-	-	-	145,127
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	579	-	-	-	-	-	-	-	579
LG Chem Malaysia SDN, BHD	150	-	-	-	-	-	-	-	150
LG Fuel Cell Systems Inc.	8,908	-	24,527	-	(8,863)	55	1,952	53	26,632
FJ Composite Materials Co., Ltd.	-	-	3,015	-	(192)	46	-	-	2,869
WUXI CL New Energy Technology Ltd.	-	-	1,178	-	(101)	56	-	-	1,133
LF Life Sciences Poland Ltd.	-	17	-	-	-	-	-	-	17
<b>Total</b>	<b>260,828</b>	<b>17</b>	<b>28,720</b>	<b>(10,846)</b>	<b>4,320</b>	<b>(4,104)</b>	<b>1,952</b>	<b>58</b>	<b>280,945</b>

(in millions of Korean won)

	December 31, 2016								
	Beginning balance	Acquisitions / Transfer	Dividends	Share of profit (loss) of associates and joint ventures	Share of other comprehensive income of associates and joint ventures	Disposal	Others	Ending balance	
LG VINA Chemical Co., Ltd.	3,742	-	(926)	907	151	-	-	3,874	
HL Greenpower Co., Ltd.	16,559	-	-	369	-	-	(1)	16,927	
LG Holdings (HK) Ltd.	73,012	-	-	3,555	(1,724)	-	-	74,843	
TECWIN Co., Ltd.	6,535	-	-	679	-	-	-	7,214	
SEETEC Co., Ltd.	155,539	-	(17,500)	10,263	-	-	31	148,333	
LG Chem BRASIL INTERMEDIACAO DE NEGOCIOS DO SETOR QUIMICO LTDA.	579	-	-	-	-	-	-	579	
LG Chem Malaysia SDN.BHD	150	-	-	-	-	-	-	150	
CNOOC & LG Petrochemicals Co., Ltd.	14,287	-	-	(7,780)	(367)	(6,140)	-	-	
KLPE Limited Liability Partnership <sup>1</sup>	20,079	-	-	264	(582)	(19,761)	-	-	
LG Fuel Cell Systems Inc.	3,265	17,555	-	(12,048)	192	-	(56)	8,908	
<b>Total</b>	<b>293,747</b>	<b>17,555</b>	<b>(18,426)</b>	<b>(3,791)</b>	<b>(2,330)</b>	<b>(25,901)</b>	<b>(26)</b>	<b>260,828</b>	

<sup>1</sup> During 2016, the Group decided to discontinue the business of KLPE Limited Liability Partnership and completed the disposal by collecting ₩23,724 million of the investments.

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**11. Property, Plant and Equipment**

Changes in property, plant and equipment for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

(in millions of  
Korean won)

	September 30, 2017										
	Land	Buildings	Structures	Machinery	Vehicles	Tools	Equipment	Others	Construction -in-progress	Machinery -in-transit	Total
<b>Beginning balance</b>	1,470,226	2,181,396	651,061	4,288,509	8,594	384,777	95,905	100,360	473,111	26,194	9,680,133
Cost	1,507,154	2,796,650	1,145,962	12,656,297	41,183	1,005,567	323,646	238,906	484,950	26,194	20,226,509
Accumulated depreciation	-	(575,932)	(479,210)	(8,305,213)	(32,439)	(611,202)	(225,767)	(138,098)	-	-	(10,367,861)
Accumulated impairment	(36,928)	(39,322)	(15,691)	(62,575)	(150)	(9,588)	(1,974)	(448)	(11,839)	-	(178,515)
Business combination (Note 34)	62,738	81,497	6,590	109,011	197	8,256	2,918	-	164,722	57,392	493,321
Acquisitions/ Transfer	25,048	200,003	36,607	663,713	8,504	101,437	30,046	33,434	1,237,600	57,904	2,394,296
Disposals/ Transfer	(2,062)	(2,432)	(749)	(22,724)	(45)	(25,767)	(704)	-	(1,028,635)	(51,189)	(1,134,307)
Exchange differences	26	(1,869)	205	(10,029)	(21)	(1,876)	(247)	-	6,156	-	(7,655)
Depreciation	-	(54,334)	(35,482)	(721,231)	(2,971)	(93,212)	(26,061)	(49,847)	-	-	(983,138)
Impairment	-	-	(2,603)	(94,917)	(27)	(4,861)	(613)	(1,704)	(32,391)	-	(137,116)
Reversal of impairment	-	6,836	1,193	3,721	2	797	91	-	-	-	12,640
Transfer to assets held for sale (Note 35)	-	-	-	(3,036)	-	(1,396)	(17)	-	-	-	(4,449)
<b>Ending balance</b>	<b>1,555,976</b>	<b>2,411,097</b>	<b>656,822</b>	<b>4,213,017</b>	<b>14,233</b>	<b>368,155</b>	<b>101,318</b>	<b>82,243</b>	<b>820,563</b>	<b>90,301</b>	<b>10,313,725</b>
Cost	1,592,904	3,068,528	1,188,890	13,139,545	40,403	1,033,714	346,312	268,211	864,595	90,301	21,633,403
Accumulated depreciation	-	(625,020)	(515,028)	(8,780,695)	(26,032)	(653,778)	(242,503)	(183,816)	-	-	(11,026,872)
Accumulated impairment	(36,928)	(32,411)	(17,040)	(145,833)	(138)	(11,781)	(2,491)	(2,152)	(44,032)	-	(292,806)

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(in millions of  
Korean won)

	December 31, 2016										
	Land	Buildings	Structures	Machinery	Vehicles	Tools	Equipment	Others	Construction -in-progress	Machinery -in-transit	Total
<b>Beginning balance</b>	910,241	2,010,009	606,497	4,228,274	9,524	349,835	82,541	135,437	524,314	10,537	8,867,209
Cost	912,108	2,539,113	1,053,036	11,705,377	38,599	863,085	282,407	281,556	565,061	10,537	18,250,879
Accumulated depreciation	-	(505,157)	(434,206)	(7,437,847)	(28,933)	(504,276)	(198,119)	(146,119)	-	-	(9,254,657)
Accumulated impairment	(1,867)	(23,947)	(12,333)	(39,256)	(142)	(8,974)	(1,747)	-	(40,747)	-	(129,013)
Business combination (Note 34)	414,123	77,141	43,795	266,818	1,019	4,737	3,631	-	3,109	-	814,373
Acquisitions/ Transfer	147,464	187,602	49,349	840,388	1,821	167,536	42,775	30,982	1,319,406	55,261	2,842,584
Disposals/ Transfer	(1,441)	(5,607)	(150)	(17,518)	(34)	(8,475)	(650)	-	(1,391,481)	(39,604)	(1,464,960)
Exchange differences	(161)	(5,427)	(346)	(57,826)	1	(1,834)	(474)	-	23,871	-	(42,196)
Depreciation	-	(66,347)	(46,139)	(943,927)	(3,729)	(126,050)	(30,985)	(65,611)	-	-	(1,282,788)
Impairment	-	(15,975)	(1,945)	(26,015)	(8)	(810)	(474)	(448)	(6,108)	-	(51,783)
Transfer to assets held for sale (Note 35)	-	-	-	(1,685)	-	(162)	(459)	-	-	-	(2,306)
<b>Ending balance</b>	<b>1,470,226</b>	<b>2,181,396</b>	<b>651,061</b>	<b>4,288,509</b>	<b>8,594</b>	<b>384,777</b>	<b>95,905</b>	<b>100,360</b>	<b>473,111</b>	<b>26,194</b>	<b>9,680,133</b>
Cost	1,507,154	2,796,650	1,145,962	12,656,297	41,183	1,005,567	323,646	238,906	484,950	26,194	20,226,509
Accumulated depreciation	-	(575,932)	(479,210)	(8,305,213)	(32,439)	(611,202)	(225,767)	(138,098)	-	-	(10,367,861)
Accumulated impairment	(36,928)	(39,322)	(15,691)	(62,575)	(150)	(9,588)	(1,974)	(448)	(11,839)	-	(178,515)

During the nine-month period ended September 30, 2017, the Group capitalized ₩4,848 million of borrowing costs (2016: ₩3,834 million), which recognized from borrowings in relation to acquisition of property, plant and equipment, on property, plant and equipment. The capitalization rate of borrowings used to determine the amount of borrowing costs eligible for capitalization is 2.36% (2016: 1.85%).

As at September 30, 2017, certain property, plant and equipment have been pledged as collaterals for borrowings and credit line agreements (Note 18).

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Line items including depreciation in the consolidated statements of profit or loss for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	2017		2016	
	Three months	Nine months	Three months	Nine months
Cost of sales	296,993	908,568	299,910	889,453
Selling and administrative expenses	24,536	71,949	22,552	63,687
Others	877	2,621	561	1,143
<b>Total</b>	<b>322,406</b>	<b>983,138</b>	<b>323,023</b>	<b>954,283</b>

Details of machinery and construction-in-progress classified as a finance lease as at September 30, 2017 and December 31, 2016, are as follows:

(in millions of Korean won)

	September 30, 2017		December 31, 2016	
	Machinery	Construction -in-progress	Machinery	Construction -in-progress
Cost- capitalized finance leases	44,370	2,533	42,669	-
Accumulated depreciation	(13,563)	-	(8,534)	-
Net book amount	<b>31,807</b>	<b>2,533</b>	<b>34,135</b>	<b>-</b>

The Group leases machinery and construction-in-progress under non-cancellable finance lease agreements. The lease terms are 3~10 years and the contracts include an agreement that the ownership of the assets is transferred by the end of the lease term.

The Group reviews annually whether there is any indication that an asset may be impaired. During the nine-month period ended September 30, 2017 and the whole year period ended December 31, 2016, Glass Substrate business, a CGU in IT & Electronic materials and Advanced materials segment, was tested for impairment as its economic performance was lower than expected.

The recoverable amount of the CGU is calculated on a basis of fair value less costs of disposal for the nine-month period ended September 30, 2017. Impairment is mainly related to machinery and equipment used in manufacturing.

The amounts of impairment loss recognized as other non-operating expenses for the nine-month period ended September 30, 2017 and the year ended December 31, 2016, are as follows:

(in millions of Korean won)

	September 30, 2017 Glass Substrate <sup>1</sup>	December 31, 2016 Glass Substrate
<b>Impaired amount</b>		
Property, plant and equipment	124,138	47,699
Intangible assets	2,345	535
<b>Key assumptions</b>		
Pre-tax discount rate	N/A	9.5%
Growth rate for subsequent years exceeding five years	N/A	-



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<sup>1</sup> The recoverable amount is calculated based on fair value less costs of disposal, and it is categorized as level 2.

The Group decided to dispose of certain non-current assets for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016. The differences between net fair value and carrying amount were recognized as impairment losses (Note 35).

**12. Intangible Assets**

Changes in intangible assets for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

(in millions of Korean won)

	<b>September 30, 2017</b>					
	<b>Development costs</b>	<b>Industrial property rights</b>	<b>Goodwill</b>	<b>Memberships</b>	<b>Others</b>	<b>Total</b>
<b>Beginning balance</b>	102,853	344,882	252,253	52,793	79,363	832,144
Business combination (Note 34)	53,913	12,770	686,229	3,723	203,144	959,779
Acquisitions/ Transfer	70,300	32,365	-	1,538	15,977	120,180
Disposals/ Transfer	(6,135)	(30)	-	(4,237)	(137)	(10,539)
Exchange differences	(1,509)	2,053	(5,810)	(19)	(311)	(5,596)
Amortization	(24,039)	(23,792)	-	-	(24,810)	(72,641)
Impairment	(5,596)	(868)	-	-	(153)	(6,617)
Reversal of impairment	6	-	-	-	-	6
Transfer to assets held for sale (Note 35)	-	(359)	-	-	-	(359)
<b>Ending balance</b>	<b>189,793</b>	<b>367,021</b>	<b>932,672</b>	<b>53,798</b>	<b>273,073</b>	<b>1,816,357</b>

(in millions of Korean won)

	<b>December 31, 2016</b>					
	<b>Development costs</b>	<b>Industrial property rights</b>	<b>Goodwill</b>	<b>Memberships</b>	<b>Others</b>	<b>Total</b>
<b>Beginning balance</b>	61,670	200,779	143,599	49,642	46,196	501,886
Business combination (Note 34)	17,500	123,364	105,223	1,674	32,855	280,616
Acquisitions/ Transfer	58,486	38,956	-	2,309	14,591	114,342
Disposals/ Transfer	(10,087)	(804)	-	(826)	(57)	(11,774)
Exchange differences	(212)	1,104	3,431	(6)	(384)	3,933
Amortization	(22,151)	(18,362)	-	-	(13,801)	(54,314)
Impairment	(2,353)	(155)	-	-	(37)	(2,545)
<b>Ending balance</b>	<b>102,853</b>	<b>344,882</b>	<b>252,253</b>	<b>52,793</b>	<b>79,363</b>	<b>832,144</b>

**LG Chem, Ltd. and Subsidiaries**  
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Line items including amortization of intangible assets for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	2017		2016	
	Three months	Nine months	Three months	Nine months
Cost of sales	9,340	18,897	2,985	8,557
Selling and administrative expenses	19,315	53,744	11,057	30,301
<b>Total</b>	<b>28,655</b>	<b>72,641</b>	<b>14,042</b>	<b>38,858</b>

During the nine-month period ended September 30, 2017, the Group recognized total research and development costs of ₩641,818 million (2016: ₩484,301 million) as expenses. Changes in greenhouse gas emission permits for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

(in thousands of tons and millions of Korean won)

	September 30, 2017					
	2016		2017		Total	
	Quantity	Amount	Quantity	Amount	Quantity	Amount
<b>Beginning balance</b>	6,191	-	6,475	-	12,666	-
Allocation with nil consideration	350	-	799	-	1,149	-
Purchase	250	5,133	598	8,072	848	13,205
Business combination	62	-	58	-	120	-
Borrowings/ Carry forwards between years	685	-	(685)	-	-	-
Surrendered to the government	(7,538)	(5,133)	-	-	(7,538)	(5,133)
<b>Ending balance</b>	<b>-</b>	<b>-</b>	<b>7,245</b>	<b>8,072</b>	<b>7,245</b>	<b>8,072</b>

(in thousands of tons and millions of Korean won)

	December 31, 2016							
	2015		2016		2017		Total	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
<b>Beginning balance</b>	6,842	-	6,650	-	6,508	-	20,000	-
Allocation with nil consideration	(7)	-	10	-	-	-	3	-
Purchase	-	-	-	-	-	-	-	-
Business combination	(35)	-	(34)	-	(33)	-	(102)	-
Borrowings/ Carry forwards between years	435	-	(435)	-	-	-	-	-
Surrendered to the government	(7,235)	-	-	-	-	-	(7,235)	-
<b>Ending balance</b>	<b>-</b>	<b>-</b>	<b>6,191</b>	<b>-</b>	<b>6,475</b>	<b>-</b>	<b>12,666</b>	<b>-</b>

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**13. Other Current and Non-current Assets**

Details of other current and non-current assets as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
<b>Current</b>		
Advance payments to suppliers and prepaid expenses	182,831	139,005
Prepaid value added tax	195,037	111,787
Others	27,726	10,001
<b>Total</b>	<u>405,594</u>	<u>260,793</u>
<b>Non-current</b>		
Long-term advance payments to suppliers and long-term prepaid expenses	97,584	47,037
Others	10,922	10,920
<b>Total</b>	<u>108,506</u>	<u>57,957</u>

**14. Borrowings**

Borrowings as at September 30, 2017 and December 31, 2016, consist of:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
<b>Current</b>		
Short-term borrowings	993,966	1,633,898
Current-portion of long-term borrowings of bank loans	262,327	343,935
Current-portion of debentures	99,888	229,922
Finance lease liabilities	5,208	4,886
	<u>1,361,389</u>	<u>2,212,641</u>
<b>Non-current</b>		
Long-term borrowings	738,329	607,996
Debentures	1,147,039	39,732
Finance lease liabilities	29,649	30,272
	<u>1,915,017</u>	<u>678,000</u>
<b>Total</b>	<u>3,276,406</u>	<u>2,890,641</u>

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Details of short-term borrowings as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	Bank	Latest maturity date	Interest rate(%) as at September 30, 2017	September 30, 2017	December 31, 2016
Notes discounted <sup>1</sup> (Negotiable notes)	Woori Bank and others	2017.12.26	Libor + 0.50 and others	9,299	448,722
Bank loans	Nonghyup Bank and others	2018.08.25	2.35 and others	984,667	1,185,176
<b>Total</b>				<u>993,966</u>	<u>1,633,898</u>

<sup>1</sup> As at September 30, 2017, trade receivables transferred to financial institutions but not derecognized are accounted for as collateralized borrowing transaction (Note 7).

Details of long-term borrowings as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	Bank	September 30, 2017		Amount in Korean won		
		Annual interest rate (%)	Latest maturity date	Current	Non-current	Total
<b>Borrowings in Korean won</b>	KEB Hana Bank <sup>1</sup>	1.75	2019.12.15	794	353	441
<b>Borrowings in foreign currencies</b>	Sumitomo Mitsui Banking Corporation	3Libor + 1.05	2019.10.28	57,189	-	57,189
	Standard Chartered Bank	3Libor + 1.00	2017.11.20	40,872	40,872	-
	Standard Chartered Bank	3Libor + 1.60	2019.09.27	26,845	-	26,845
	Construction Bank of China	PBOC ×0.90	2023.11.13	29,268	3,970	25,298
	Communications Bank of China	PBOC	2021.09.20	24,129	3,447	20,682
	Agricultural Bank of China	3Libor + 0.80	2020.06.29	27,929	7,006	20,923
	Agricultural Bank of China	PBOC ×0.90	2022.09.03	29,645	1,724	27,921
	Bank of America	6Libor + 1.60	2017.10.24	34,316	34,316	-
	Bank of America	3Libor + 1.50	2018.07.30	34,316	34,316	-
	Bank of America	3Libor + 0.90	2019.05.27	45,868	-	45,868
	Bank of China	3Libor + 0.95	2022.05.05	39,721	6,177	33,544
	BNP PARIBAS	EURIBOR + 0.99	2019.12.13	20,129	-	20,129
	BNP PARIBAS	WIBOR + 0.55	2019.12.13	100	-	100
	CNOOC Finance	PBOC ×0.90	2021.12.23	80,487	5,171	75,316
	HSBC	3Libor + 1.00	2018.12.20	114,387	-	114,387
	HSBC	3Libor + 1.05	2019.04.19	141,839	52,618	89,221
	JP Morgan	3Libor + 0.85	2018.01.15	22,876	22,876	-
	JP Morgan	3Libor + 1.05	2018.01.15	22,871	22,871	-
	Mizuho Banking Corporation	3Libor + 1.02	2019.04.17	45,755	-	45,755
	Citi	EURIBOR + 0.90	2020.04.06	40,457	-	40,457
	United Overseas Bank	3Libor + 0.85	2017.10.25	24,801	24,801	-
	United Overseas Bank	6Libor + 1.55	2019.09.24	9,310	93	9,217
	Hang Seng	3Libor + 1.00	2020.09.25	19,323	1,716	17,607
	ING	EURIBOR + 0.83	2022.09.01	67,429	-	67,429
<b>Total</b>				<u>1,000,656</u>	<u>262,327</u>	<u>738,329</u>

<sup>1</sup> Other receivables are pledged as collaterals for the above long-term borrowings (Note 18).

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(in millions of Korean won)	December 31, 2016					
	Bank	Annual interest rate (%)	Latest maturity date	Amount in Korean won	Current	Non- current
<b>Borrowings in Korean won</b>	KEB Hana Bank <sup>1</sup>	1.75	2019.12.15	1,058	353	705
<b>Borrowings in foreign currencies</b>	Sumitomo Mitsui Banking Corporation	3Libor + 0.60	2017.04.03	24,170	24,170	-
	Sumitomo Mitsui Banking Corporation	3Libor + 1.05	2019.10.28	36,904	-	36,904
	Standard Chartered Bank	3Libor + 1.00	2017.11.20	48,313	48,313	-
	Construction Bank of China	PBOC x 0.90	2023.11.13	32,476	2,915	29,561
	Communications Bank of China	PBOC	2021.09.20	27,721	3,465	24,256
	Agricultural Bank of China	3Libor + 0.80	2020.06.29	32,291	5,889	26,402
	Agricultural Bank of China	PBOC x 0.90	2022.09.03	31,533	-	31,533
	Bank of America	6Libor + 1.60	2017.10.24	36,057	36,057	-
	Bank of America	3Libor + 1.50	2018.08.13	36,057	-	36,057
	Bank of China	3Libor + 0.95	2021.12.21	32,195	3,606	28,589
	BNP PARIBAS	EURIBOR + 0.99	2019.12.13	6,560	-	6,560
	BNP PARIBAS	WIBOR + 0.55	2019.12.13	90	-	90
	CITI	6Libor + 2.00	2017.03.10	18,029	18,029	-
	CNOOC Finance	PBOC x 0.90	2021.12.23	80,914	7,263	73,651
	HSBC	3Libor + 1.00	2018.12.20	120,190	-	120,190
	HSBC	3Libor + 1.05	2018.09.19	48,076	-	48,076
	HSBC	3Libor + 1.05	2018.11.12	48,076	-	48,076
	HSBC	3Libor + 1.05	2019.04.19	56,495	7,217	49,278
	JP Morgan	3Libor + 0.85	2018.01.15	24,037	-	24,037
	JP Morgan	3Libor + 1.05	2018.01.15	24,031	-	24,031
	Mizuho Banking Corporation	3Libor + 1.02	2017.04.16	48,076	48,076	-
	Mizuho Banking Corporation	3Libor + 0.75	2017.05.27	66,468	66,468	-
	United Overseas Bank	3Libor + 0.85	2017.12.21	72,114	72,114	-
<b>Total</b>				<u>951,931</u>	<u>343,935</u>	<u>607,996</u>

<sup>1</sup> Other receivables are pledged as collaterals for the above long-term borrowings (Note 18).

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Details of debentures as at September 30, 2017 and December 31, 2016, are as follows:

(in millions of Korean won)	September 30, 2017					
	Financial institution	Annual interest rate (%)	Latest maturity date	Total Amount	Current	Non-current
<b>47<sup>th</sup> Debentures (non-guaranteed/private)</b>	Government Employees Pension Service and others	3.20	2018.04.30	30,000	30,000	-
<b>48<sup>th</sup> Debentures (non-guaranteed/public)</b>	NH Investment & Securities Co., Ltd. and others	3.77	2019.02.21	50,000	-	50,000
<b>49<sup>th</sup> Debentures (non-guaranteed/private)</b>	KB Asset Management Co., Ltd and others	2.82	2018.12.12	100,000	-	100,000
<b>50-1<sup>st</sup> Debentures (non-guaranteed/public)</b>	NH Investment & Securities Co., Ltd. and others	1.95	2020.05.19	120,000	-	120,000
<b>50-2<sup>nd</sup> Debentures (non-guaranteed/public)</b>	NH Investment & Securities Co., Ltd. and others	2.28	2022.05.19	400,000	-	400,000
<b>50-3<sup>rd</sup> Debentures (non-guaranteed/public)</b>	NH Investment & Securities Co., Ltd. and others	2.53	2024.05.19	280,000	-	280,000
<b>Debentures in Korean won (collateralized)<sup>1</sup></b>	IBK Securities Co., Ltd. and others	4.70	2018.03.05	40,000	40,000	-
<b>Debentures in Korean won (non-guaranteed)</b>	Ebest Investment & securities Co., Ltd. and others	4.75	2017.10.24	30,000	30,000	-
	NH Investment & Securities Co., Ltd. and others	1.93	2020.02.16	100,000	-	100,000
	NH Investment & Securities Co., Ltd. and others	2.26	2022.02.16	100,000	-	100,000
Less: discount on debentures				(3,073)	(112)	(2,961)
<b>Total</b>				<u>1,246,927</u>	<u>99,888</u>	<u>1,147,039</u>

<sup>1</sup> Certain property, plant and equipment are pledged as collaterals for the above debentures (Note 18).

(in millions of Korean won)	December 31, 2016					
	Financial institution	Annual interest rate (%)	Latest maturity date	Total Amount	Current	Non-current
<b>Debentures in Korean won (non-guaranteed)</b>	Woori Security and others	4.11	2017.03.29	200,000	200,000	-
	Ebest Investment & securities Co., Ltd. and others	4.75	2017.10.24	30,000	30,000	-
<b>Debentures in Korean won (collateralized)<sup>1</sup></b>	IBK Securities Co., Ltd. and others	4.70	2018.03.05	40,000	-	40,000
Less: discount on debentures				(346)	(78)	(268)
<b>Total</b>				<u>269,654</u>	<u>229,922</u>	<u>39,732</u>

<sup>1</sup> Certain property, plant and equipment are pledged as collaterals for the above debentures (Note 18).

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Details of finance lease liabilities as at September 30, 2017 and December 31, 2016, are as follows:

(in millions of Korean won)

Leaser	September 30, 2017				
	Annual interest rate (%)	Latest maturity date	Total Amount	Current	Non-current
Hyundai Oil Bank and others	3.12~4.13	2024.12.31	34,857	5,208	29,649
<b>Total</b>			<b>34,857</b>	<b>5,208</b>	<b>29,649</b>

(in millions of Korean won)

Leaser	December 31, 2016				
	Annual interest rate (%)	Latest maturity date	Total Amount	Current	Non-current
Hyundai Oil Bank	3.12	2024.12.31	35,158	4,886	30,272
<b>Total</b>			<b>35,158</b>	<b>4,886</b>	<b>30,272</b>

The present value of finance lease liabilities as at September 30, 2017 and December 31, 2016, is as follows:

(in millions of Korean won)

	September 30, 2017			December 31, 2016		
	Minimum lease payments	Future finance costs	Present value	Minimum lease payments	Future finance costs	Present value
Within 1 year	5,289	81	5,208	5,000	114	4,886
Between 1-5 years	20,710	1,817	18,893	20,000	1,902	18,098
Over 5 years	13,077	2,321	10,756	15,000	2,826	12,174

**15. Provisions**

Changes in provisions for other liabilities and charges for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

(in millions of Korean won)

	September 30, 2017					
	Sales returns <sup>1</sup>	Warranty <sup>2</sup>	Greenhouse gas emission <sup>3</sup>	Legal claims <sup>4</sup>	Restoration <sup>5</sup>	Total
<b>Beginning balance</b>	10,362	41,476	27,801	10,102	95,774	185,515
Business combination(Note 34)	5,994	-	59	-	-	6,053
Additions	39,254	28,870	(1,045)	66,623	2,817	136,519
Used	(39,400)	(3,489)	(5,133)	(14,652)	(4,472)	(67,146)
<b>Ending balance</b>	16,210	66,857	21,682	62,073	94,119	260,941
Less : current portion	(11,737)	(3,347)	(21,682)	-	(16,390)	(53,156)
<b>Total</b>	<b>4,473</b>	<b>63,510</b>	<b>-</b>	<b>62,073</b>	<b>77,729</b>	<b>207,785</b>

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(in millions of Korean won)

	December 31, 2016					
	Sales returns <sup>1</sup>	Warranty <sup>2</sup>	Greenhouse gas emission <sup>3</sup>	Legal Claims <sup>4</sup>	Restoration <sup>5</sup>	Total
<b>Beginning balance</b>	5,214	27,578	3,720	-	-	36,512
Business combination(Note 34)	5,026	-	-	2,685	91,665	99,376
Additions	32,320	19,778	31,498	29,891	4,109	117,596
Used	(32,198)	(5,880)	(7,417)	(22,474)	-	(67,969)
<b>Ending balance</b>	10,362	41,476	27,801	10,102	95,774	185,515
Less : current portion	(6,279)	(1,224)	(27,801)	-	(16,390)	(51,694)
<b>Total</b>	<u>4,083</u>	<u>40,252</u>	<u>-</u>	<u>10,102</u>	<u>79,384</u>	<u>133,821</u>

<sup>1</sup> Sales return provisions have been accrued for the estimated sales return determined based on historical experience.

<sup>2</sup> Warranty provisions have been accrued for the estimated warranty service costs to be incurred based on the terms of warranty and historical experience.

<sup>3</sup> Greenhouse gas emission provisions have been accrued for estimated expenditures to be obligated for any excess emission. The estimated emission for the nine-month period ended September 30, 2017, amounts to 5,768 thousand tons (2016: 5,650 thousand tons).

<sup>4</sup> Lawsuit provisions have been accrued for certain pending cases.

<sup>5</sup> As at September 30, 2017, restoration provisions have been accrued based on the estimated expenses to restore land pollutions and others.

**16. Net Defined Benefit Liabilities**

Details of net defined benefit liabilities recognized in the statements of financial position as at September 30, 2017 and December 31, 2016, are as follows:

(in millions of Korean won)	September 30, 2017	December 31, 2016
Present value of defined benefit obligations <sup>1</sup>	1,036,207	885,259
Fair value of plan assets	(819,882)	(793,087)
<b>Liabilities in the consolidated statement of financial position</b>	<u>216,325</u>	<u>92,172</u>

<sup>1</sup> The present value of retirement benefit obligations is net of existing contributions to the National Pension Plan of ₩862 million as at September 30, 2017 (December 31, 2016: ₩821 million).

The amounts recognized in the statements of profit or loss for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)	2017		2016	
	Three months	Nine months	Three months	Nine months
Current service cost <sup>1</sup>	34,499	102,568	30,040	88,804
Past service cost	656	656	-	-
Interest expense	763	2,215	827	2,183
<b>Total, included in employee benefit expenses</b>	<u>35,918</u>	<u>105,439</u>	<u>30,867</u>	<u>90,987</u>



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<sup>1</sup> The above amounts excluded ₩603 million (2016: ₩49 million) of expenses capitalized to construction in progress and development costs.

Post-employment benefits recognized for defined contribution plan for the nine-month period ended September 30, 2017, amounted to ₩1,277 million (2016: ₩640 million).

Post-employment benefits recognized in the statements of profit or loss for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

*(in millions of Korean won)*

	2017		2016	
	Three months	Nine months	Three months	Nine months
Cost of sales	24,429	72,041	20,783	61,943
Selling and administrative expenses	12,456	34,675	10,387	29,684
<b>Total</b>	<b>36,885</b>	<b>106,716</b>	<b>31,170</b>	<b>91,627</b>

Movements in the present value of defined benefit obligations for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

*(in millions of Korean won)*

	September 30, 2017	December 31, 2016
<b>Beginning balance</b>	885,259	717,770
Business combination (Note 34)	69,693	52,191
Transfer in	2,988	11,390
Transfer out	(1,615)	(5,764)
Current service cost	103,171	119,179
Past service cost	656	-
Interest expense	19,935	20,419
Remeasurements:		
Actuarial loss from change in demographic assumptions	2,738	3,731
Actuarial loss (gain) from change in financial assumptions	2,625	(11,225)
Actuarial loss from experience adjustments	-	24,400
Others	-	3,453
Exchange differences	(588)	234
Payments from plans	(48,655)	(50,519)
<b>Ending balance</b>	<b>1,036,207</b>	<b>885,259</b>

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Movements in the fair value of plan assets for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
<b>Beginning balance</b>	793,087	636,578
Business combination (Note 34)	57,771	13,080
Transfer in	-	1,384
Transfer out	(134)	-
Interest income	17,720	17,475
Remeasurements:		
Return on plan assets (excluding amounts included in interest income)	(7,564)	(4,407)
Contributions:		
Employers	162	160,421
Payments from plans	(41,077)	(30,509)
Administrative costs	(83)	(935)
<b>Ending balance</b>	<u>819,882</u>	<u>793,087</u>

The actual return on plan assets for the nine-month period ended September 30, 2017, was ₩10,156 million (for the year ended December 31, 2016: ₩13,068 million).

The significant actuarial assumptions as at September 30, 2017 and December 31, 2016, are as follows:

	<b>September 30, 2017</b>	<b>December 31, 2016</b>
Discount rate	2.7% ~ 2.8%	2.2% ~ 2.9%
Salary growth rate	2.5% ~ 5.1%	2.5% ~ 5.1%

The sensitivity analysis for changes in key actuarial assumptions as at September 30, 2017, is as follows:

<i>(in millions of Korean won)</i>	<b>Increase by 1%</b>	<b>Decrease by 1%</b>
Discount rate:		
Increase (decrease) in defined benefit obligations	(107,786)	129,780
Salary growth rate:		
Increase (decrease) in defined benefit obligations	125,687	(106,787)

A decrease in corporate bond yields may lead most significantly to an increase in defined benefit liabilities.

The above sensitivity analyses 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 recognized on the statement of financial position.

The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the prior period.

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Plan assets as at September 30, 2017 and December 31, 2016, consist of:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>				<b>December 31, 2016</b>			
	<b>Quoted price</b>	<b>Unquoted price</b>	<b>Total</b>	<b>Compo- sition</b>	<b>Quoted price</b>	<b>Unquoted price</b>	<b>Total</b>	<b>Compo- sition</b>
Insurance contracts with guaranteed yield	819,882	-	819,882	100%	793,087	-	793,087	100%

**17. Other Current and Non-Current Liabilities**

Details of other current and non-current liabilities as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
<b>Current</b>		
Advances from customers	86,969	70,590
Dividends payable	-	12
Withholdings	98,635	68,946
Unearned revenues	12,541	6,201
Accrued expenses	215,145	123,895
<b>Total</b>	<b>413,290</b>	<b>269,644</b>
<b>Non-current</b>		
Long-term accrued expenses	42,102	30,267
Long-term unearned revenues	5,710	-
<b>Total</b>	<b>47,812</b>	<b>30,267</b>

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**18. Commitments and Contingencies**

- (1) As at September 30, 2017, the Parent Company and certain subsidiaries have been guaranteed from the Seoul Guarantee Insurance Company for the execution of contracts.
- (2) As at September 30, 2017, the Parent Company has provided one blank promissory note to the Korea National Oil Corporation as a collateral in relation to petroleum import surcharges.
- (3) As at September 30, 2017, the Parent Company and certain subsidiaries have various specific line of credit agreements with several financial institutions, as follows:

*(unit: in millions of Korean won and in millions of foreign currencies)*

Classification	The Parent Company		Certain Overseas Subsidiaries					
	KRW	USD	KRW	USD	CNY	EUR	INR	PLN
Limit of bank overdraft	69,100	50	-	100	499	20	-	32
Limit of the letter of credit	32,000	378	-	250	682	3	-	-
Limit of discount of notes from export	-	1,481	-	-	-	-	-	-
Limit of guaranteed payments in other foreign currency	-	80	-	-	-	-	-	-
Limit of loan arrangements	-	-	76,493	1,868	7,182	125	3,200	-

The Group also entered into credit line agreements with other financial institutions relating to trade finance and import/export amounting to ₩20,000 million and US\$ 140 million.

- (4) As at September 30, 2017, the Parent Company and certain subsidiaries have B2B purchase arrangements with several financial institutions with limit of ₩349,000 million and ₩15,000 million, respectively.
- (5) As at September 30, 2017, in relation to price fixing of mobile batteries, the consumers in U.S., Canada and Israel have filed three class actions claims and the customers have filed four separate actions against the Parent Company and certain overseas subsidiaries. However, the ultimate outcome of these cases cannot be determined at the reporting date.
- (6) In addition, as at September 30, 2017, the Parent Company and certain overseas subsidiaries have been named as a plaintiff in 11 and 24 legal actions, respectively, involving ₩20,810 million and ₩3,674 million in claims, respectively. They have been named as a defendant in 9 and 15 legal actions, respectively, with ₩4,845 million and ₩14,418 million in claims, respectively. The ultimate outcome of these cases cannot be determined at the reporting date.
- (7) As at September 30, 2017, the Parent Company has technology license agreements with STYRON EUROPE GmbH and other companies for the production of Polycarbonate products. Further, the Parent Company has entered into manufacture and production technical contracts with Exxon Mobile and others.
- (8) The Parent Company has entered into a license agreement with LG Corp. to use trademarks on the products that the Group manufactures and sells, and on the services the Group provides in relation to its business.
- (9) As at September 30, 2017, the Parent Company has entered into payment guarantee contract of US\$ 1 million and EUR 5 million with financial institutions to guarantee the warrant of certain

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installed products. The Parent Company has entered into a payment guarantee contract of US\$ 20 million with a financial institution in relation to advance received from customers for certain sales. Also, certain subsidiaries have entered into payment guarantee contract of CNY 630 million with financial institutions in relation to custom of imported raw materials.

(10) As at September 30, 2017 and December 31, 2016, assets pledged as collaterals for the borrowings are as follows:

*(in millions of Korean won)*

	<b>September 30, 2017</b>			<b>Secured party</b>
	<b>Secured amount</b>	<b>Borrowings / Loan</b>	<b>Limit</b>	
Other receivables	300	Non-current borrowings (Won currency borrowings)	793	KEB Hana Bank
Gumi facility, Anseong facility, Genetics institute	52,000	Won currency public debentures (Collateralized)	40,000	Creditors
	<u>52,300</u>		<u>40,793</u>	

*(in millions of Korean won)*

	<b>December 31, 2016</b>			<b>Secured party</b>
	<b>Secured amount</b>	<b>Borrowings / Loan</b>	<b>Limit</b>	
Other receivables	300	Non-current borrowings (Won currency borrowings)	1,058	KEB Hana Bank
Gumi facility, Anseong facility, Genetics institute	52,000	Won currency public debentures (Collateralized)	40,000	Creditors
	<u>52,300</u>		<u>41,058</u>	

(11) Capital expenditure arrangement that has not incur at the end of the reporting period is as follows:

*(in millions of Korean won)*

	<b>September 30, 2017</b>	<b>December 31, 2016</b>
Property, plant and equipment	727,821	399,562

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**19. Share Capital**

Changes in share capital and share premium for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

*(in millions of Korean won  
and in shares)*

	Ordinary shares		Preferred shares		Share premium
	Number of shares	Share capital	Number of shares	Share capital	
January 1, 2016	66,271,100	331,356	7,628,921	38,144	897,424
December 31, 2016	66,271,100	331,356	7,628,921	38,144	897,424
Share issuance due to business combination	4,321,243	21,606	59,879	300	1,116,614
September 30, 2017	70,592,343	352,962	7,688,800	38,444	2,014,038

Changes in treasury shares for the nine-month period ended September 30, 2017 and for the year ended December 31, 2016, are as follows:

<i>(in millions of Korean won and in shares)</i>	Number of shares			Gain on disposal of treasury shares (Reserves)
	Ordinary shares	Preferred shares	Carrying amount	
January 1, 2016	359,795	5,519	15,484	13,855
December 31, 2016	359,795	5,519	15,484	13,855
Purchase of treasury shares due to business combination	1,284,891	10,328	337,211	-
Acquisition of fractional shares due to business combination	7,730	520	2,250	-
September 30, 2017	1,652,416	16,367	354,945	13,855

**20. Retained Earnings**

Retained earnings as at September 30, 2017 and December 31, 2016, consist of:

<i>(in millions of Korean won)</i>	September 30, 2017	December 31, 2016
Legal reserve <sup>1</sup>	302,594	300,294
Discretionary reserve <sup>2</sup>	11,410,610	10,408,789
Retained earnings before appropriation	2,000,559	1,753,689
<b>Total</b>	<b>13,713,763</b>	<b>12,462,772</b>

<sup>1</sup> The Commercial Code of the Republic of Korea requires the Parent Company to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued share capital. The reserve is not available for cash dividends payment, but may be transferred to share capital or used to reduce accumulated deficit. When the accumulated legal reserves (the sum of capital reserves and earned profit reserves) are greater than 1.5 times the paid-in capital amount, the excess legal reserves may be distributed in accordance with a resolution of the shareholders' meeting.

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<sup>2</sup> The Parent Company separately accumulates a discretionary reserve for research and human resource development through appropriation of retained earnings, which has been included as deductible expense for the corporate income tax return according to the Special Tax Treatment Law. The reserve could be reversed in accordance with the terms of related tax laws.

**21. Other Components of Equity**

Details of other components of equity as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
Treasury shares (Note 19)	(354,945)	(15,484)
Capital transactions within the Group <sup>1</sup>	(5,944)	(215)
<b>Total</b>	<u>(360,889)</u>	<u>(15,699)</u>

<sup>1</sup> Include gain or loss on disposal of investments and investment differences due to changes in equity, net of deferred tax.

**22. Selling and Administrative Expenses**

Selling and administrative expenses for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>2017</b>		<b>2016</b>	
	<b>Three months</b>	<b>Nine months</b>	<b>Three months</b>	<b>Nine months</b>
Wages and salaries	177,128	541,359	105,508	378,678
Post-employment benefits(Note 16)	12,456	34,675	10,387	29,684
Employee benefits	33,829	102,690	29,039	84,400
Travel expense	13,270	37,964	10,580	31,793
Water & Utilities	11,046	30,073	9,265	25,058
Packaging expense	1,671	5,103	1,536	4,787
Rental expenses	20,481	62,477	16,914	57,101
Commission expenses	87,705	250,715	73,026	211,279
Depreciation (Note 11)	24,545	71,972	22,552	63,687
Advertising expense	6,691	19,348	5,185	14,194
Freight expenses	135,946	399,286	106,129	323,374
Training expense	5,110	12,919	4,510	10,679
Amortization (Note 12)	19,315	53,744	11,057	30,301
Sample expense	5,028	14,334	3,975	13,911
Development costs	39,670	100,720	41,120	91,122
Others	73,365	190,566	52,057	141,817
<b>Total</b>	<u>667,256</u>	<u>1,927,945</u>	<u>502,840</u>	<u>1,511,865</u>

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**23. Breakdown of Expenses by Nature**

Cost of sales, and selling and administrative expenses by nature for the three-month and nine-month periods ended September 30, 2017 and 2016, consist of:

(in millions of Korean won)

	2017		2016	
	Three months	Nine months	Three months	Nine months
Changes in inventories of merchandise, finished goods, semi-finished goods and work-in-process	(27,702)	(33,159)	6,785	8,150
Raw materials and consumables used	3,440,598	10,650,183	2,761,359	8,155,063
Purchase of merchandise	383,638	1,050,174	269,029	777,899
Employee benefit expenses (Note 24)	556,880	1,641,680	380,623	1,283,775
Advertising expenses	7,012	20,179	5,498	15,058
Freight expenses	145,830	427,566	114,380	348,620
Commission expenses	147,134	417,115	119,979	341,146
Depreciation and amortization	350,192	1,053,181	336,540	992,070
Operating lease payments	21,887	65,738	19,862	58,116
Other expenses	581,916	1,659,679	580,226	1,637,507
<b>Total</b>	<b>5,607,385</b>	<b>16,952,336</b>	<b>4,594,281</b>	<b>13,617,404</b>

**24. Employee Benefit Expenses**

Details of employee benefit expenses for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	2017		2016	
	Three months	Nine months	Three months	Nine months
Salaries	467,788	1,380,498	303,834	1,063,766
Post-employment benefits – Defined benefit plan (Note 16)	35,918	105,439	30,867	90,987
Post-employment benefits – Defined contribution plan (Note 16)	967	1,277	303	640
Others	52,207	154,466	45,619	128,382
<b>Total</b>	<b>556,880</b>	<b>1,641,680</b>	<b>380,623</b>	<b>1,283,775</b>



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**25. Finance Income and Costs**

Details of finance income and costs for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	2017		2016	
	Three months	Nine months	Three months	Nine months
<b>Finance income</b>				
Interest income <sup>1</sup>	7,730	21,536	9,423	30,707
Dividend income	127	331	-	-
Gain on foreign currency exchange	42,376	119,989	33,077	87,216
Gain on foreign currency translation	19,362	46,769	7,396	10,359
Gain on disposal of available-for-sale securities	-	-	-	18
Gain on disposal of trading derivatives	-	-	-	1,640
Gain on disposal of hedging derivatives	-	170	-	-
<b>Total</b>	<b>69,595</b>	<b>188,795</b>	<b>49,896</b>	<b>129,940</b>
<b>Finance costs</b>				
Interest expense <sup>2</sup>	23,770	77,710	19,889	56,123
Loss on foreign currency exchange	32,606	128,765	54,867	110,676
Loss on foreign currency translation	6,474	12,837	6,607	35,393
Loss on disposal of trading derivatives	-	-	-	3,141
Loss on redemption of debentures	-	-	-	3,031
<b>Total</b>	<b>62,850</b>	<b>219,312</b>	<b>81,363</b>	<b>208,364</b>

<sup>1</sup> Details of interest income for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	2017		2016	
	Three months	Nine months	Three months	Nine months
Deposits held by financial institutions	6,850	18,559	8,303	27,398
Available-for-sale financial assets	-	5	-	91
Other loans and receivables	880	2,972	1,120	3,218
<b>Total</b>	<b>7,730</b>	<b>21,536</b>	<b>9,423</b>	<b>30,707</b>

**LG Chem, Ltd. and Subsidiaries**  
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<sup>2</sup> Details of interest expense for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

*(in millions of Korean won)*

	2017		2016	
	Three months	Nine months	Three months	Nine months
Interest on bank overdraft and borrowings	16,658	57,844	15,279	43,624
Interest on finance lease liabilities	276	1,306	289	897
Interest on debentures	8,211	18,887	4,709	12,485
Other interest expenses	1,203	4,521	491	2,951
Capitalized interest for qualifying assets	(2,578)	(4,848)	(879)	(3,834)
<b>Total</b>	<b>23,770</b>	<b>77,710</b>	<b>19,889</b>	<b>56,123</b>

**26. Other Non-Operating Income**

Details of other non-operating income for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

*(in millions of Korean won)*

	2017		2016	
	Three months	Nine months	Three months	Nine months
Gain on foreign currency exchange	69,312	248,933	89,366	265,984
Gain on foreign currency translation	13,666	46,380	36,958	37,302
Gain on disposal of property, plant and equipment	3,590	5,221	167	6,114
Gain on disposal of intangible assets	1	4,869	-	-
Gain on disposal of associates	-	1,952	-	-
Others	27,756	67,250	16,536	35,557
<b>Total</b>	<b>114,325</b>	<b>374,605</b>	<b>143,027</b>	<b>344,957</b>

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**27. Other Non-Operating Expenses**

Details of other non-operating expenses for the three-month and nine-month periods ended September 30, 2017 and 2016, are as follows:

<i>(in millions of Korean won)</i>	2017		2016	
	Three months	Nine months	Three months	Nine months
Loss on foreign currency exchange	46,747	235,981	107,890	304,364
Loss on foreign currency translation	11,786	17,630	37,373	48,359
Loss on disposal of property, plant and equipment	7,586	33,692	5,434	19,433
Loss on disposal of intangible assets	304	2,111	149	1,273
Impairment loss on property, plant and equipment (Note 11)	124,247	137,116	-	2,425
Impairment loss on intangible assets (Note 12)	2,345	6,617	-	-
Loss on disposal of investments in joint ventures	-	-	-	41,252
Donations	2,018	19,138	14,774	21,349
Others	14,017	79,324	25,866	49,823
<b>Total</b>	<b>209,050</b>	<b>531,609</b>	<b>191,486</b>	<b>488,278</b>

**28. Income Taxes**

Income tax expense is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year. The estimated average annual rate used for the year ended December 31, 2017, is 21.6% (for the nine-month period ended September 30, 2016: 21.2%).

**29. Earnings per Share**

Basic earnings per share is calculated by dividing the profit attributable to owners of the Parent Company by the weighted average number of shares in issue excluding shares purchased by the Parent Company and held as treasury shares. As at the reporting date, the Parent Company has no potential ordinary 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.

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Basic earnings per share attributable to the owners of the Parent Company for the three-month and nine-month periods ended September 30, 2017 and 2016, is computed as follows:

**Basic earnings per ordinary share**

*(in millions of Korean won and  
in number of shares)*

	2017		2016	
	Three months	Nine months	Three months	Nine months
Profit attributable to ordinary shares <sup>1</sup>	468,694	1,466,070	264,870	907,075
Weighted average number of ordinary shares outstanding <sup>2</sup>	68,940,380	68,940,380	65,911,305	65,911,305
Basic earnings per ordinary shares <i>(in won)</i>	6,799	21,266	4,019	13,762

**Basic earnings per preferred share**

*(in millions of Korean won and  
in number of shares)*

	2017		2016	
	Three months	Nine months	Three months	Nine months
Profit attributable to preferred shares <sup>1</sup>	52,258	163,449	30,730	105,199
Weighted average number of preferred shares outstanding <sup>2</sup>	7,672,463	7,672,463	7,623,402	7,623,402
Basic earnings per preferred shares <i>(in won)</i>	6,811	21,303	4,031	13,799

<sup>1</sup> Profit attributable to ordinary and preferred shares are as follows:

*(in millions of Korean won)*

	2017		2016	
	Three months	Nine months	Three months	Nine months
<b>Profit attributable to the equity holders of the Parent Company</b>	520,952	1,629,519	295,600	1,012,274
Ordinary shares dividends (A)	86,175	258,526	74,150	222,451
Preferred shares dividends (B)	9,687	29,060	8,672	26,015
<b>Undistributed earnings for the period</b>	425,090	1,341,933	212,778	763,808
Undistributed earnings available for ordinary shares (C)	382,519	1,207,544	190,720	684,624
Undistributed earnings available for preferred shares (D)	42,571	134,389	22,058	79,184
<b>Profit for the period attributable to ordinary shares (A+C)</b>	468,694	1,466,070	264,870	907,075
<b>Profit for the period attributable to preferred shares (B+D)</b>	52,258	163,449	30,730	105,199

**LG Chem, Ltd. and Subsidiaries**  
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<sup>2</sup> Weighted average numbers of shares are calculated as follows:

2017				
Ordinary shares outstanding	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2017. 1. 1 - 2017. 9. 30	65,911,305	273	17,993,786,265
Share issuance due to business combination	2017. 1. 1 - 2017. 9. 30	4,321,243	273	1,179,699,339
Purchase of treasury shares	2017. 1. 1 - 2017. 9. 30	(1,284,891)	273	(350,775,243)
Purchase of treasury shares	2017. 1. 17 - 2017. 9. 30	(7,730)	257	(1,986,610)
<b>Total</b>				<b>18,820,723,751</b>

Weighted average number of ordinary shares outstanding:  $18,820,723,751 \div 273 = 68,940,380$  shares

2017				
Preferred shares outstanding	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2017. 1. 1 - 2017. 9. 30	7,623,402	273	2,081,188,746
Share issuance due to business combination	2017. 1. 1 - 2017. 9. 30	59,879	273	16,346,967
Purchase of treasury shares	2017. 1. 1 - 2017. 9. 30	(10,328)	273	(2,819,544)
Purchase of treasury shares	2017. 1. 17 - 2017. 9. 30	(520)	257	(133,640)
<b>Total</b>				<b>2,094,582,529</b>

Weighted average number of preferred shares outstanding:  $2,094,582,529 \div 273 = 7,672,463$  shares

2016				
Ordinary shares outstanding	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2016. 1. 1 - 2016. 9. 30	65,911,305	274	18,059,697,570
<b>Total</b>				<b>18,059,697,570</b>

Weighted average number of ordinary shares outstanding:  $18,059,697,570 \div 274 = 65,911,305$  shares

2016				
Preferred shares outstanding	Period	Number of shares	Number of days	Number of shares x days
Beginning balance	2016. 1. 1 - 2016. 9. 30	7,623,402	274	2,088,812,148
<b>Total</b>				<b>2,088,812,148</b>

Weighted average number of preferred shares outstanding:  $2,088,812,148 \div 274 = 7,623,402$  shares.

There were no dilutive potential outstanding ordinary shares at the reporting date. Accordingly, diluted earnings per share attributable to the equity holders of the Parent Company is identical to basic earnings per share.

**LG Chem, Ltd. and Subsidiaries**  
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**30. Dividends**

The ₩368,055 million (2016: ₩331,287 million) of dividends for the year ended December 31, 2016, was paid to the shareholders of the Parent Company in April 2017.

**31. Related Party Transactions**

As at September 30, 2017 and December 31, 2016, LG Corp. is an entity exercising a significant influence over the Group, which owns 33.34% of the Parent Company's ordinary shares.

Details of associates and other related parties that have sales and other transactions with the Group or have receivables and payables balances as at September 30, 2017 and December 31, 2016, are as follows, and the details of investments in subsidiaries, associates and joint ventures are described in Note 1.3:

<b>Related party</b>	<b>Related party's subsidiary (Domestic)</b>	<b>Related party's subsidiary (Overseas)</b>	<b>Details</b>
SERVEONE	-	Serveone(Nanjing) Co., LTD. and others	Subsidiary of LG Corp.
LG CNS Co., Ltd.	LG N-Sys Inc. and others	LG CNS America Inc. and others	Subsidiary of LG Corp.
LG Siltron Incorporated	-	-	Subsidiary of LG Corp.
LG Management Development Institute	-	-	Subsidiary of LG Corp.
LG Sports Ltd.	-	-	Subsidiary of LG Corp.
LG Holdings Japan	-	-	Subsidiary of LG Corp.
LG MMA Corporation	-	-	Joint venture of LG Corp.
LG Display Co., Ltd.	-	LG Display (China) Co., Ltd. and others	LG Enterprise group <sup>1</sup>
LG Electronics, Inc.	LG Innotek Co., Ltd. and others	Inspur LG Digital Mobile Communications Co., Ltd. and others	LG Enterprise group <sup>1</sup>
LG International Corp.	Pantos Logistics Co., Ltd. and others	LG International (Japan) Ltd. and others	LG Enterprise group <sup>1</sup>
LG Hausys, Ltd.	-	LG Hausys Tianjin Co., Ltd. and others	LG Enterprise group <sup>1</sup>
LG Household & Health Care Ltd.	Coca-Cola Beverage Co.	-	LG Enterprise group <sup>1</sup>
LG Life Sciences Ltd. <sup>2</sup>	-	-	LG Enterprise group <sup>1</sup>
LG Uplus Corp.	-	-	LG Enterprise group <sup>1</sup>
G II R Inc.	HS AD Inc.	-	LG Enterprise group <sup>1</sup>
Silicon Works Co., Ltd.	-	-	LG Enterprise group <sup>1</sup>

<sup>1</sup> Although the entity is not the related party of the Group in accordance with Korean IFRS 1024, the entity belongs to a large enterprise group in accordance with the Monopoly Regulation and Fair Trade Act.

<sup>2</sup> On January 1, 2017, LG Life Sciences Ltd. was merged into the Parent Company.

**LG Chem, Ltd. and Subsidiaries**  
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Sales and purchases with related parties for the nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	<b>2017</b>			
	<b>Sales and others</b>	<b>Purchase and others</b>		
		<b>Purchase of raw materials /merchandises</b>	<b>Acquisition of property, plant and equipment and intangible assets</b>	<b>Others</b>
<b>Entity with a significant influence over the Group</b>				
LG Corp.	-	-	-	46,397
<b>Associates and joint ventures</b>				
SEETEC Co., Ltd.	13,215	90,283	17	66,968
TECWIN Co., Ltd.	-	157	2,560	219
HL Greenpower Co., Ltd.	189,057	-	-	-
Others	22	-	-	2,049
<b>Other related parties</b>				
LG MMA Corporation	61,725	161,848	-	4,528
SERVEONE and its subsidiaries	10,413	381,167	178,004	203,392
LG CNS Co., Ltd. and its subsidiaries	13,851	1,461	83,187	55,777
Others	31	-	-	9,430
<b>Others</b>				
LG Display Co., Ltd. and its subsidiaries	995,297	-	6,090	2,165
LG Electronics Inc. and its subsidiaries	709,409	215,560	198,708	11,323
LG International Corp. and its subsidiaries	226,752	376,865	171	268,585
LG Hausys, Ltd. and its subsidiaries	164,205	7,129	486	5,851
Others	17,582	21,825	596	6,190
<b>Total</b>	<b>2,401,559</b>	<b>1,256,295</b>	<b>469,819</b>	<b>682,874</b>

**LG Chem, Ltd. and Subsidiaries**  
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(in millions of Korean won)

	2016			
	Sales and others	Purchase and others		
		Purchase of raw materials /merchandises	Acquisition of property, plant and equipment and intangible assets	Others
<b>Entity with a significant influence over the Group</b>				
LG Corp.	-	-	-	36,637
<b>Associates and joint ventures</b>				
SEETEC Co., Ltd.	8,784	76,165	14	61,114
TECWIN Co., Ltd.	-	70	1,144	-
HL Greenpower Co., Ltd.	66,607	-	-	-
Others	1,301	-	-	1,729
<b>Other related parties</b>				
LG MMA Corporation	60,817	126,756	-	2,656
SERVEONE and its subsidiaries	11,894	339,172	107,274	74,744
LG CNS Co., Ltd. and its subsidiaries	9,169	2,718	58,155	40,044
Others	-	-	-	8,880
<b>Others</b>				
LG Display Co., Ltd. and its subsidiaries	993,809	-	-	35
LG Electronics Inc. and its subsidiaries	435,357	181,525	23,329	6,923
LG International Corp. and its subsidiaries	198,598	226,072	8	141,074
LG Hausys, Ltd. and its subsidiaries	142,993	709	6,551	74,979
Others	16,884	26,561	309	6,236
<b>Total</b>	<b>1,946,213</b>	<b>979,748</b>	<b>196,784</b>	<b>455,051</b>



**LG Chem, Ltd. and Subsidiaries**  
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Balances of receivables and payables arising from sales and purchases of goods and services as at September 30, 2017 and December 31, 2016, are as follows:

(in millions of Korean won)

	September 30, 2017			
	Receivables			
	Trade receivables and others	Loan receivables	Other receivables	Total
<b>Entity with a significant influence over the Group</b>				
LG Corp.	-	-	9,172	9,172
<b>Associates and joint ventures</b>				
SEETEC Co., Ltd.	-	-	923	923
TECWIN Co., Ltd.	-	-	-	-
HL Greenpower Co., Ltd.	69,362	-	-	69,362
Others	23	-	-	23
<b>Other related parties</b>				
LG MMA Corporation	6,147	-	376	6,523
SERVEONE and its subsidiaries	1,533	-	27,967	29,500
LG CNS Co., Ltd. and its subsidiaries	5,846	-	44	5,890
Others	27	-	4,903	4,930
<b>Others</b>				
LG Display Co., Ltd. and its subsidiaries	123,231	-	78,409	201,640
LG Electronics Inc. and its subsidiaries	274,227	-	33,798	308,025
LG International Corp. and its subsidiaries	47,718	-	901	48,619
LG Hausys, Ltd. and its subsidiaries	41,696	-	284	41,980
Others	165	-	1,338	1,503
<b>Total</b>	<b>569,975</b>	<b>-</b>	<b>158,115</b>	<b>728,090</b>
(in millions of Korean won)	September 30, 2017			
	Payables			
	Trade payables	Borrowings	Other payables	Total
<b>Entity with a significant influence over the Group</b>				
LG Corp.	-	-	10,230	10,230
<b>Associates and joint ventures</b>				
SEETEC Co., Ltd.	9,089	-	10,367	19,456
TECWIN Co., Ltd.	342	-	493	835
HL Greenpower Co., Ltd.	356	-	-	356
Others	-	-	41	41
<b>Other related parties</b>				
LG MMA Corporation	19,337	-	-	19,337
SERVEONE and its subsidiaries	838	-	288,458	289,296
LG CNS Co., Ltd. and its subsidiaries	1,894	-	61,709	63,603
Others	-	-	1,103	1,103
<b>Others</b>				
LG Display Co., Ltd. and its subsidiaries	-	-	6,090	6,090
LG Electronics Inc. and its subsidiaries	84,254	-	115,277	199,531
LG International Corp. and its subsidiaries	19,474	-	54,183	73,657
LG Hausys, Ltd. and its subsidiaries	3,051	-	1,840	4,891
Others	2,755	-	3,402	6,157
<b>Total</b>	<b>141,390</b>	<b>-</b>	<b>553,193</b>	<b>694,583</b>

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	December 31, 2016			
	Receivables			
	Trade receiv- ables and others	Loan receivables	Other receivables	Total
<b>Entity with a significant influence over the Group</b>				
LG Corp.	-	-	6,572	6,572
<b>Associates and joint ventures</b>				
SEETEC Co., Ltd.	-	-	-	-
TECWIN Co., Ltd.	-	-	-	-
HL Greenpower Co., Ltd.	43,493	-	-	43,493
LG Fuel Cell Systems Inc.	-	9,857	341	10,198
Others	-	-	20	20
<b>Other related parties</b>				
LG MMA Corporation	8,858	-	583	9,441
SERVEONE and its subsidiaries	3,128	-	26,183	29,311
LG CNS Co., Ltd. and its subsidiaries	17,152	-	45	17,197
Others	-	-	4,314	4,314
<b>Others</b>				
LG Display Co., Ltd. and its subsidiaries	105,174	-	81,467	186,641
LG Electronics Inc. and its subsidiaries	236,834	-	22,294	259,128
LG International Corp. and its subsidiaries	37,592	-	904	38,496
LG Hausys, Ltd. and its subsidiaries	36,381	-	341	36,722
Others	1,005	-	937	1,942
<b>Total</b>	<b>489,617</b>	<b>9,857</b>	<b>144,001</b>	<b>643,475</b>

(in millions of Korean won)

	December 31, 2016			
	Payables			
	Trade payables	Borrowings	Other payables	Total
<b>Entity with a significant influence over the Group</b>				
LG Corp.	-	-	420	420
<b>Associates and joint ventures</b>				
SEETEC Co., Ltd.	10,009	-	9,695	19,704
TECWIN Co., Ltd.	76	-	140	216
HL Greenpower Co., Ltd.	-	-	-	-
LG Fuel Cell Systems Inc.	-	-	-	-
Others	-	-	95	95
<b>Other related parties</b>				
LG MMA Corporation	15,777	-	-	15,777
SERVEONE and its subsidiaries	726	-	228,113	228,839
LG CNS Co., Ltd. and its subsidiaries	25,757	-	19,494	45,251
Others	-	-	301	301
<b>Others</b>				
LG Display Co., Ltd. and its subsidiaries	-	-	30	30
LG Electronics Inc. and its subsidiaries	78,137	-	4,786	82,923
LG International Corp. and its subsidiaries	19,814	-	24,579	44,393
LG Hausys, Ltd. and its subsidiaries	4,401	-	456	4,857
Others	2,801	-	4,085	6,886
<b>Total</b>	<b>157,498</b>	<b>-</b>	<b>292,194</b>	<b>449,692</b>

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Fund transactions with related parties for the nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	2017		2016	
	Equity contributions in cash (capital reduction)	Loan (Repayment)	Equity contributions in cash (capital reduction)	Loan (Repayments)
<b>Associates and joint ventures</b>				
FJ Composite Materials Co., Ltd.	3,015	-	-	-
LG Fuel Cell Systems Inc.	24,527	(9,584)	17,555	-
KLPE Limited Liability Partnership	-	-	(23,724)	-
WUXI CL New Energy Technology Ltd.	1,178	-	-	-
<b>Total</b>	<b>28,720</b>	<b>(9,584)</b>	<b>(6,169)</b>	<b>-</b>

Dividends received from related parties for the nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	2017	2016
<b>Associates and joint ventures</b>		
SEETEC Co., Ltd.	10,000	-
LG VINA Chemical Co., Ltd.	846	927
<b>Total</b>	<b>10,846</b>	<b>927</b>

Dividends paid to related party for the nine-month periods ended September 30, 2017 and 2016, are as follows:

(in millions of Korean won)

	2017	2016
<b>Entity with a significant influence over the Group</b>		
LG Corp.	111,097	99,987
<b>Total</b>	<b>111,097</b>	<b>99,987</b>

Compensation for key management of the Group for the nine-month periods ended September 30, 2017 and 2016, consists of:

(in millions of Korean won)

	2017	2016
Short-term employee benefits	55,964	28,315
Post-employment benefits	3,087	2,434
<b>Total</b>	<b>59,051</b>	<b>30,749</b>

Key management includes directors and audit committee members having duties and responsibilities over planning, operations and controlling of the Group's business activities.

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There are no provisions recognized against receivables from related parties as at September 30, 2017.

As at September 30, 2017, there are no payment guarantees provided by the Group for related parties.

**32. Cash Generated from Operations**

Reconciliation between profit before income tax and cash generated from operations for the nine-month periods ended September 30, 2017 and 2016, is as follows:

<i>(in millions of Korean won)</i>	<b>2017</b>	<b>2016</b>
<b>Profit before income tax</b>	2,130,275	1,301,751
<b>Adjustments for:</b>		
Depreciation	980,540	953,212
Amortization	72,641	38,858
Post-employment benefits	105,439	90,987
Finance income	(114,957)	(80,983)
Finance costs	109,557	145,021
Foreign exchange differences	(75,786)	(39,117)
Loss (gain) on valuation of inventories	(14,122)	12,972
Gain on disposal of property, plant and equipment	(5,221)	(6,114)
Gain on disposal of intangible assets	(4,869)	-
Loss on disposal of property, plant and equipment	33,692	19,433
Loss on disposal of intangible assets	2,111	1,273
Impairment loss on property, plant and equipment	137,116	2,425
Reversal of impairment loss on property, plant and equipment	(12,640)	-
Impairment loss on intangible assets	6,617	-
Reversal of impairment loss on intangible assets	(6)	-
Loss on disposal of investments in joint ventures	-	41,252
Gain on disposal of investments in associates	(1,952)	-
Additions to provisions	136,519	78,703
Other expense (income)	(5,462)	7,793
Increase in inventories	(82,686)	(182,193)
Decrease (increase) in trade receivables	(847,927)	155,588
Decrease (increase) in other receivables	(34,588)	449
Increase in other current assets	(115,477)	(36,517)
Increase in settlement of derivatives	(2,114)	(1,408)
Increase (decrease) in trade payables	(32,505)	208,529
Increase in other payables	92,971	6,605
Increase (decrease) in other current liabilities	108,956	(111,791)
Decrease in net defined benefit liabilities	(6,150)	(11,410)
Decrease in provisions	(67,146)	(34,164)
Other cash flows from operations	5,534	(75,314)
<b>Cash generated from operations</b>	<b>2,498,360</b>	<b>2,485,840</b>

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The significant non-cash transactions for the nine-month periods ended September 30, 2017 and 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>2017</b>	<b>2016</b>
Transfer of construction-in-progress	1,028,635	975,844
Transfer of machinery-in-transit	51,189	25,953
Reclassification of long-term borrowings into current maturities	552,662	210,961
Reclassification of assets held for sale	4,449	2,306

**33. Segment Information**

General information about the Group's reportable segments is as follows:

<b>Segment</b>	<b>Products or services</b>	<b>Major customers</b>
Basic materials & Chemicals	ABS, PC, EP, PE, PP, Acrylic, Alcohol, SAP, PVC, Synthetic rubber, Special resin, BPA, Ethylene, Propylene and others	LG International Corp., LG Electronics Inc., Mitsubishi Corp. and others
Energy solutions	Mobile batteries, Automotive batteries, Electricity storage batteries and others	Hewlett-Packard Co., General Motors Corp., and others
IT & Electronic materials and Advanced materials <sup>1</sup>	Polarizers, 3D FPR, LCD Photoresist, OLED materials, Battery materials and others	LG Display Co., Ltd., Samsung Display Co., Ltd., BOE, AUO and others
Life Sciences <sup>2</sup>	Growth hormone, Vaccine, Antidiabetic, agricultural chemicals and others	HUADONG NINGBO, UNICEF, Intervet and others
Common and others	Crop protection products, Seeds, Fertilizers, General management, sales and R&D	National Agriculture Cooperative Federation and others

<sup>1</sup> The Group presents IT & Electronic materials and Advanced materials as Advanced materials has been included in IT & Electronic materials since 2016. The comparative information was restated to reflect such changes.

<sup>2</sup> Life Sciences segment was disclosed separately as LG Life Sciences, Ltd. was merged into the Parent Company on January 1, 2017.

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The segment information on revenue, profit or loss for the nine-month periods ended September 30, 2017 and 2016, is as follows:

(in millions of Korean won)

	2017					Total
	Basic materials & Chemicals	Energy solutions	IT & Electronic materials and Advanced materials	Life Sciences	Common and others <sup>3</sup>	
Total segment revenue	13,129,862	3,307,991	2,263,194	403,495	539,190	19,643,732
Inter-segment revenue	134,959	1	234,171	2,314	6,475	377,920
Revenue from external customers <sup>1</sup>	12,994,903	3,307,990	2,029,023	401,181	532,715	19,265,812
Operating profit (loss) <sup>2</sup>	2,174,556	15,161	93,532	52,638	(22,411)	2,313,476

(in millions of Korean won)

	2016					Total
	Basic materials & Chemicals	Energy solutions	IT & Electronic materials and Advanced materials	Common and others <sup>3</sup>		
Total segment revenue	10,689,417	2,502,227	1,917,154	281,180		15,389,978
Inter-segment revenue	125,614	-	110,706	6,058		242,378
Revenue from external customers <sup>1</sup>	10,563,803	2,502,227	1,806,448	275,122		15,147,600
Operating profit (loss) <sup>2</sup>	1,632,496	(45,636)	(38,780)	(17,884)		1,530,196

<sup>1</sup> Revenue from external customers consists of sales of goods. Interest income and dividend income are included in finance income.

<sup>2</sup> Management assesses the performance of the operating segments based on a measurement of operating profit of segment.

<sup>3</sup> Common and other segments include operating segments not qualifying as a reportable segment, supporting divisions as well as R&D divisions.

The segment information on assets and liabilities as at September 30, 2017 and December 31, 2016, is as follows:

(in millions of Korean won)

	September 30, 2017					Total
	Basic materials & Chemicals	Energy solutions	IT & Electronic materials and Advanced materials	Life Sciences	Common and others	
Reportable segment asset <sup>1</sup>	9,010,747	4,971,499	3,351,188	1,667,372	4,706,744	23,707,550
Investments in associates and joint ventures	4,147	20,319	-	17	256,462	280,945
Reportable segment liability <sup>1</sup>	2,719,791	2,114,946	803,730	358,188	1,589,097	7,585,752

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(in millions of Korean won)

	December 31, 2016				
	Basic materials & Chemicals	Energy solutions	IT & Electronic materials and Advanced materials	Common and others	Total
Reportable segment asset <sup>1</sup>	8,441,909	4,434,851	3,423,864	4,186,436	20,487,060
Investments in associates and joint ventures	4,604	16,927	-	239,297	260,828
Reportable segment liability <sup>1</sup>	3,342,989	1,985,652	1,007,775	99,677	6,436,093

<sup>1</sup> Assets and liabilities are measured in a manner consistent with those in the financial statements, and allocated on the basis of segment operation.

The external sales and non-current assets by geographical segments from continuing operations for the nine-month periods ended September 30, 2017 and 2016, and as at September 30, 2017 and December 31, 2016, are as follows:

(in millions of Korean won)

	Sales		Non-current assets <sup>1</sup>	
	2017	2016	September 30, 2017	December 31, 2016
Korea <sup>2</sup>	6,362,043	4,861,712	9,861,600	8,533,239
China	6,481,740	4,984,759	1,831,610	1,672,386
Asia	3,546,265	2,886,207	31,850	27,532
America	1,068,340	918,804	246,534	251,696
Europe	1,565,630	1,285,155	160,752	29,711
Others	241,794	210,963	-	-
<b>Total</b>	<b>19,265,812</b>	<b>15,147,600</b>	<b>12,132,346</b>	<b>10,514,564</b>

<sup>1</sup> Represents aggregate amount of property, plant and equipment, intangible assets and investment properties.

<sup>2</sup> Domestic sales include the exports made through local letters of credit.

There is no single external customer contributes over 10% of the Group's revenue for the nine-month periods ended September 30, 2017 and 2016.

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**34. Business Combination**

In order to enhance future-oriented business portfolio and leap into a global player of red bio industry by enlarging investment in long-term and stable new drugs development, the Parent Company merged LG Life Sciences, Ltd. on January 1, 2017.

Goodwill of ₩686,229 million arising from the business combination is attributable to sales increase expected from combining the operations of the Group and Life Sciences business. Goodwill recognized through the business combination is not deductible for income tax purposes.

The following table summarizes the consideration paid for business combination, the fair value of assets acquired and liabilities assumed at the acquisition date:

<i>(in millions of Korean won)</i>	<b>Amount</b>
Consideration	
Equity securities (Ordinary 4,321,243 shares, Preferred 59,879 shares) <sup>1</sup>	1,138,593
Total consideration	<u>1,138,593</u>
Recognized amounts of identifiable assets acquired and liabilities assumed	
Cash and cash equivalents	43,832
Trade and other (non-current) receivables	112,703
Inventories	123,083
Property, plant and equipment	493,321
Intangible assets	273,550
Other assets	8,315
Trade payables	(38,736)
Borrowings	(729,745)
Provisions	(6,053)
Net defined benefit liabilities	(11,922)
Other liabilities	(153,195)
Treasury shares (Ordinary 1,284,891 shares, Preferred 10,328 shares) <sup>1</sup>	337,211
Fair value of identifiable net assets	<u>452,364</u>
Goodwill	<u>686,229</u>
<b>Total</b>	<u><b>1,138,593</b></u>

<sup>1</sup>The fair value of ordinary shares, preferred shares and treasury shares acquired were based on the market price at the acquisition date.

With regard to the above business combination, stock issuance cost of ₩73 million was deducted from equity.

The fair value and gross contractual amount for trade and other (non-current) receivables at the acquisition date amount to ₩114,721 million, of which ₩2,018 million is expected to be uncollectible.

The revenues of ₩401,181 million and profit of ₩40,382 million for the nine-month period ended September 30, 2017 arose after the acquisition date are reflected in the consolidated interim statement of profit or loss.



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On April 1, 2016, the Group acquired 100% shares of FarmHannong Co., Ltd. (formerly Dongbu FarmHannong Co., Ltd.), which is engaged to manufacture domestic agricultural pesticides. As a result of the business combination, the Group expects increase in sales through diversification in market such as entering into new industry and others.

Goodwill of ₩86,858 million arising from the business combination is attributable to the acquired customer base and sales increase expected from combining the operations of the Parent Company and FarmHannong Co., Ltd.

The following table summarizes the consideration paid for FarmHannong Co., Ltd., the fair value of assets acquired and liabilities assumed at the acquisition date:

<i>(in millions of Korean won)</i>	<b>Amount</b>
Consideration	
Cash and cash equivalents	424,500
Total consideration	<u>424,500</u>
Recognized amounts of identifiable assets acquired and liabilities assumed	
Cash and cash equivalents	15,837
Trade and other (non-current) receivables	272,140
Inventories	236,255
Assets held for sale	65,591
Property, plant and equipment	561,083
Intangible assets	141,968
Investment properties	14,235
Other assets	9,198
Trade and other (non-current) payables	(150,385)
Borrowings	(678,687)
Provisions	(98,576)
Net defined benefit liabilities	(38,073)
Deferred tax liabilities	(5,472)
Other liabilities	(23,649)
Fair value of identifiable net assets	<u>321,465</u>
Less: non-controlling interest	<u>16,177</u>
	<u>337,642</u>
Goodwill	<u>86,858</u>
<b>Total</b>	<u><b>424,500</b></u>

The fair value of trade and other (non-current) receivables was ₩272,140 million including trade receivables with a fair value of ₩200,619 million. The gross contractual amount for trade receivables at the acquisition date amounts to ₩296,011 million, of which ₩23,871 million was expected to be uncollectible.

On August 31, 2016, the Group acquired assets and liabilities relating to Pressure Sensitive Adhesive Application business from LG Hausys, Ltd. As a result of the business combination, the Parent Company expects an increase in sales through diversification of market such as adding business portfolio by expanding a business field to an industrial adhesive film area.

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Goodwill of ₩4,112 million arose from the business combination is resulted from the customer relationship newly acquired and sales increase from combination of the Parent Company and Pressure Sensitive Adhesive Application business.

The following table summarizes the consideration paid for LG Hausys, Ltd. relating to acquiring Pressure Sensitive Adhesive Application business, the fair value of assets acquired and liabilities assumed at the acquisition date:

<i>(in millions of Korean won)</i>	<b>Amount</b>
Consideration	
Cash and cash equivalents	75,303
Total consideration	<u>75,303</u>
Recognized amounts of identifiable assets acquired and liabilities assumed	
Trade receivables	15,958
Inventories	9,998
Property, plant and equipment	43,006
Intangible assets	13,487
Other assets	1,298
Trade payables	(12,356)
Net defined benefit liabilities	(200)
Fair value of identifiable net assets	<u>71,191</u>
Goodwill	<u>4,112</u>
<b>Total</b>	<u><b>75,303</b></u>

The fair value and gross contractual amount for trade receivables at the acquisition date were ₩15,958 million. None of trade receivables were expected to be uncollectible.

The Group has the right to be reimbursed from LG Hausys, Ltd. for damages resulted from lawsuits filed prior to the business combination of the Pressure Sensitive Adhesive Application business.

On November 1, 2016, the Parent Company acquired assets and liabilities relating to Positive electrode business from GSEM Co., Ltd. As a result of the business combination, the Parent Company expects to result in upgrade of Positive electrode manufacturing technologies and enhancement of competency in battery production through vertical integration.

The following table summarizes the consideration paid for GSEM CO., LTD. in relation to acquiring Positive Electrode business, the fair value of assets acquired and liabilities assumed at the acquisition date:

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<i>(in millions of Korean won)</i>	<b>Amount</b>
Consideration	
Cash and cash equivalents	59,307
Total consideration	<u>59,307</u>
Recognized amounts of identifiable assets acquired and liabilities assumed	
Cash and cash equivalents	800
Inventories	12,318
Property, plant and equipment	47,155
Intangible assets	153
Investment properties	1,041
Other assets	928
Provisions	(800)
Net defined benefit liabilities	(838)
Other liabilities	<u>(1,450)</u>
Fair value of identifiable net assets	59,307
Goodwill	<u>-</u>
<b>Total</b>	<b><u>59,307</u></b>

On December 31, 2016, the Parent Company acquired additional 20% shares of LG Chem (HUIZHOU) Petrochemical Co., Ltd. (formerly, CNOOC & LG Petrochemicals Co., Ltd.), a joint venture, and acquired control in accordance with the shareholders' agreement. As a result of the business combination, the Group expects increase in sales by expanding market share.

Goodwill of ₩14,253 million arose from the business combination is resulted from increase in market share and economies of scale after acquiring control.

The following table summarizes the consideration paid for LG Chem(HUIZHOU) Petrochemical Co., Ltd., the fair value of assets acquired and liabilities assumed at the acquisition date:

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<i>(in millions of Korean won)</i>	<b>Amount</b>
Consideration	
Cash and cash equivalents	58,771
Fair value of investment in joint venture before business combination	8,306
Total consideration	<u>67,077</u>
Recognized amounts of identifiable assets acquired and liabilities assumed	
Cash and cash equivalents	63,968
Trade and other (non-current) receivables	7,139
Inventories	31,547
Property, plant and equipment	163,129
Intangible assets	19,785
Deferred tax assets	21,605
Other assets	32,421
Trade and other (non-current) payables	(99,747)
Borrowings	(159,096)
Deferred tax liabilities	(1,377)
Other liabilities	(3,912)
Fair value of identifiable net assets	<u>75,462</u>
Less: non-controlling interest	<u>(22,638)</u>
	<u>52,824</u>
Goodwill	<u>14,253</u>
<b>Total</b>	<u><b>67,077</b></u>

The shares of LG Chem(HUIZHOU) Petrochemical Co., Ltd. held by the Parent Company before business combination were measured at the fair value and the Parent Company recognized a gain on disposal of investments in joint ventures of ₩4,004 million.

The fair value of trade and other (non-current) receivables at the acquisition date were ₩7,139 million. None of trade and other non-current receivables were expected to be uncollectible.

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**36. Assets Held for sale**

The Group decided to dispose of Electrolyte division, 2CCL business and others, and certain portion of battery facilities with the approval of management in February 2016, January 2017, and May 2017, respectively. The related assets were reclassified as assets held for sale, and the disposal is expected to be completed in 2017. Assets and liabilities of Research Institute and FarmHwaong Co., Ltd., which is acquired during the course of the business combination of FarmHannong Co., Ltd., are also included. The disposal is expected to be completed in 2017.

Details of assets and liabilities of disposal group classified as held for sale as at September 30, 2017 and December 31, 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
<b>Assets of disposal group</b>		
Property, plant and equipment	8,370	7,213
Intangible assets	359	-
Other receivables and others	801	891
<b>Total</b>	<u>9,530</u>	<u>8,104</u>
<b>Liabilities of disposal group</b>		
Other payables and others	31	42
<b>Total</b>	<u>31</u>	<u>42</u>

Assets of the disposal group were measured at fair value immediately before the initial classification of the assets as held for sale and the related other non-operating expenses for the nine-month periods ended September 30, 2017 and 2016, are as follows:

<i>(in millions of Korean won)</i>	<b>2017</b>	<b>2016</b>
Impairment loss on property, plant and equipment	9,061	1,216
Impairment loss on intangible assets	4	-
<b>Total</b>	<u>9,065</u>	<u>1,216</u>