UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

	FORM 20-F
(Ma	ark One)
	REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934
	OR
\boxtimes	ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
	For the fiscal year ended December 31, 2018
	OR
	TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
	OR
	SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
	Date of event requiring this shell company report
	For the transition period fromto
	Commission file number 1-32238
	LG Display Co., Ltd.
	(Exact name of Registrant as specified in its charter)

The Republic of Korea (Jurisdiction of incorporation or organization)

LG Display Co., Ltd. (Translation of Registrant's name into English)

LG Twin Towers, 128 Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, Republic of Korea (Address of principal executive offices)

Su Yeon Suh

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Facsimile No.: +82-2-3777-0785

(Name, telephone, e-mail and/or facsimile number and address of company contact person)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

American Depositary Shares, each representing one-half
of one share of Common Stock
Common Stock, par value \(\pi \)5,000 per share

* Not for trading, but only in connection with the registration of the American Depositary Shares.

Securities registered or to be registered pursuant to Section 12(g) of the Act.
None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.
None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

357,815,700 shares of common stock, par value \text{\text{\$\psi}}5,000 per share

337,	,013,700 shares of common s	tock, par value ++3,000 per shar	C
Indicate by check mark if the reg	gistrant is a well-known season	ned issuer, as defined in Rule 405	of the Securities
If this report is an annual or tran Section 13 or 15 (d) of the Securities		k mark if the registrant is not requives \boxtimes No	ired to file reports pursuant to
Indicate by check mark whether Exchange Act of 1934 during the precand (2) has been subject to such filing	ceding 12 months (or for such		
Indicate by check mark whether pursuant to Rule 405 of Regulation S-registrant was required to submit such	T (§232.405 of this chapter) d	lectronically every Interactive Data luring the preceding 12 months (or	
Indicate by check mark whether emerging growth company. See the de 12b-2 of the Exchange Act.		rated filer, an accelerated filer, a n I filer," "accelerated filer" and "en	· · · · · · · · · · · · · · · · · · ·
Large accelerated filer ⊠	Accelerated filer □	Non-accelerated filer \square	Emerging growth company
If an emerging growth company the registrant has elected not to use th standards† provided pursuant to Secti	e extended transition period for	1	

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

Board to its Accounting Standards Codification after April 5, 2012.

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards

U.S. GAAP □	International Financial Reporting Standards as issued by the International Accounting Standards Board ⊠	Other \square
If "Other" has been checked in response registrant has elected to follow. ☐ Item 17	e to the previous question, indicate by check mark w \Box Item 18	hich financial statement item the
If this is an annual report, indicate by checken Exchange Act). \square Yes \boxtimes No	neck mark whether the registrant is a shell company	(as defined in Rule 12b-2 of the

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PRESENTATION OF FINANCIAL AND OTHER INFORMATION

In this annual report, the terms "we," "us," "our" and "LG Display" refer to LG Display Co., Ltd. and, unless otherwise indicated or required by context, our consolidated subsidiaries. Notwithstanding the foregoing, in the context of any legal proceedings or governmental investigations, "LG Display" refers to LG Display Co., Ltd. and does not include any of its subsidiaries, or any other entities or persons.

The financial statements included in this annual report are prepared in accordance with International Financial Reporting Standards, or IFRS, as issued by the International Accounting Standards Board, or IASB. As such, we make an explicit and unreserved statement of compliance with IFRS, as issued by the IASB, with respect to our consolidated financial statements as of December 31, 2017 and 2018 and for each of the years ended in the three-year period ended December 31, 2018 included in this annual report.

Unless expressly stated otherwise, all financial data included in this annual report are presented on a consolidated basis.

All references to "Korean Won," "Won" or "\w" in this annual report are to the currency of the Republic of Korea, all references to "U.S. dollars" or "US\s" are to the currency of the United States, all references to "Japanese Yen," "Yen" or "\w" are to the currency of Japan, all references to "RMB" or "Chinese Renminbi" are to the currency of the People's Republic of China, all references to "NT\s" are to the currency of Taiwan, all references to "Euro" or "\w" are to the official currency of the European Economic and Monetary Union, all references to "PLN" are to the currency of the Republic of Poland, all references to "R\s" are to the currency of Brazil, all references to "SG\s" are to the currency of Singapore, and all references to "VND" are to the currency of Vietnam.

Any discrepancies in any table between the totals and the sums of the amounts listed are due to rounding.

For your convenience, this annual report contains translations of Won amounts into U.S. dollars at the noon buying rate in New York City for cable transfers in Korean Won as certified by the Federal Reserve Bank of New York for customs purposes in effect on December 31, 2018, which was \$41,112.85 = \$41,00.

FORWARD-LOOKING STATEMENTS

We have made forward-looking statements in this annual report. Our forward-looking statements contain information regarding, among other things, our financial condition, future plans and business strategy. Words such as "contemplate," "seek to," "anticipate," "believe," "estimate," "expect," "intend," "plan" and similar expressions, as they relate to us, are intended to identify a number of these forward-looking statements. These forward-looking statements reflect management's present expectations and projections about future events and are not a guarantee of future performance. Although we believe that these expectations and projections are reasonable, such forward-looking statements are inherently subject to risks, uncertainties and assumptions about us, including, among other things:

- the cyclical nature of our industry;
- our dependence on introducing new products on a timely basis;
- our dependence on growth in the demand for our products;
- our ability to compete effectively;
- our dependence on a select group of key customers;
- our ability to successfully manage our capacity expansion and allocation in response to changing industry and market conditions:
- our dependence on key personnel;
- general economic and political conditions, including those related to the display panel industry;
- possible disruptions in commercial activities caused by events such as natural disasters, terrorist activity and armed conflict;
- fluctuations in foreign currency exchange rates; and
- those other risks identified in the "Risk Factors" section of this annual report.

Except as required by law, we undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the events discussed in the forward-looking statements in this annual report might not occur and our actual results could differ materially from those anticipated in these forward-looking statements.

All subsequent forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

PART I

Item 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

Item 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

Item 3. KEY INFORMATION

Item 3.A. Selected Financial Data

The selected consolidated financial data set forth below as of and for the years ended December 31, 2014, 2015, 2016, 2017 and 2018 have been derived from our consolidated financial statements and the related notes, which have been prepared under IFRS as issued by the IASB. Our audited consolidated financial statements as of December 31, 2017 and 2018 and for each of the years in the three-year period ended December 31, 2018 and the related notes are included in this annual report.

The information set forth below is not necessarily indicative of the results of future operations and should be read in conjunction with "Item 5. Operating and Financial Review and Prospects" and our consolidated financial statements and related notes included in this annual report.

In addition to preparing financial statements in accordance with IFRS as issued by the IASB included in this annual report, we also prepare financial statements in accordance with Korean International Financial Reporting Standards, or K-IFRS, as adopted by the Korean Accounting Standards Board, or KASB, which we are required to file with the Financial Services Commission and the Korea Exchange under the Financial Investment Services and Capital Markets Act of Korea. See "Item 10.B. Memorandum and Articles of Association—Business Report." English translations of such financial statements are furnished to the SEC on Form 6-K, which are not incorporated by reference to this or any of our previous annual reports on Form 20-F. The operating profit or loss presented in the consolidated statements of comprehensive income or loss prepared in accordance with K-IFRS for the years ended December 31, 2017 and 2018 included in the Form 6-K furnished to the SEC on February 28, 2019 is a profit of \(\frac{\text{W}}{2},462\) billion and \(\frac{\text{W}}{93}\) billion, respectively. For further information, please see the Form 6-K furnished to the SEC on February 28, 2019, which is not incorporated by reference to this annual report.

Pursuant to the IFRS as issued by IASB, we are not required to separately present operating profit or loss in our consolidated statements of comprehensive income or loss prepared in accordance with IFRS. Therefore, the financial statements included in this annual report, which are prepared in accordance with IFRS as issued by IASB, do not present operating profit or loss as a separate line item.

Consolidated statements of comprehensive income (loss) data

	Year ended December 31,							
	2014	2015	2016	2017	2018	2	018 (1)	
						,	s of US\$, except	
		,	Won, except for p				share data)	
Revenue	₩ 26,456	₩ 28,384	₩ 26,504	₩ 27,790	₩ 24,337	US\$	21,869	
Cost of sales	(22,667)	(24,070)	(22,754)	(22,425)	(21,251)		(19,096)	
Gross profit	3,789	4,314	3,750	5,366	3,085		2,772	
Selling expenses	(747)	(878)	(695)	(994)	(834)		(749)	
Administrative expenses	(520)	(593)	(610)	(696)	(938)		(843)	
Research and development								
expenses	(1,164)	(1,218)	(1,134)	(1,213)	(1,221)		(1,097)	
Profit (loss) before income tax	1,242	1,434	1,316	2,333	(91)		(82)	
Income tax expense	(325)	(411)	(385)	(396)	(88)		(79)	
Profit (loss) for the year	917	1,023	931	1,937	(179)		(161)	
Total comprehensive income (loss)								
for the year	843	1,003	953	1,700	(195)		(175)	
Basic earnings (loss) per share								
(Won, US\$)	₩ 2,527	₩ 2,701	₩ 2,534	₩ 5,038	₩ (579)	US\$	(0.52)	
Diluted earnings (loss) per share								
(Won, US\$)	₩ 2,527	₩ 2,701	₩ 2,534	₩ 5,038	₩ (579)	US\$	(0.52)	

Consolidated statements of financial position data

		As of December 31,						
	2014	2015	2016	2017	2018	2	2018 (1)	
		(in billions of W	Von)	·	(in mil	lions of US\$)	
Cash and cash equivalents	₩ 890	₩ 752	₩ 1,559	₩ 2,603	₩ 2,365	US\$	2,125	
Deposits in banks	1,526	1,772	1,164	758	78		70	
Trade accounts and notes receivable, net	3,444	4,098	4,958	4,325	2,829		2,542	
Inventories	2,754	2,352	2,288	2,350	2,691		2,418	
Total current assets	9,241	9,532	10,484	10,474	8,800		7,908	
Property, plant and equipment, net	11,403	10,546	12,031	16,202	21,600		19,410	
Total assets	22,967	22,577	24,884	29,160	33,176		29,812	
Trade accounts and notes payable	3,392	2,765	2,877	2,875	3,087		2,774	
Current financial liabilities	968	1,416	668	1,453	1,554		1,396	
Other accounts payable	1,508	1,500	2,450	3,170	3,567		3,205	
Total current liabilities	7,550	6,607	7,058	8,979	9,954		8,945	
Non-current financial liabilities	3,279	2,808	4,111	4,150	7,031		6,318	
Long-term advance received	_	_	_	830	1,114		1,001	
Total liabilities	11,184	9,872	11,422	14,718	18,289		16,434	
Share capital and share premium	4,040	4,040	4,040	4,040	4,040		3,630	
Retained earnings	7,455	8,159	9,004	10,622	10,240		9,202	
Total equity	11,783	12,705	13,462	14,982	14,886		13,376	

Other financial data

		Year ended December 31,								
	2014	2015	2016	2017	2018	201	8 (1)			
	(in	(in billions of Won, except for percentages and per								
			share data)			share	data)			
Gross margin (2)	14.3%	15.2%	14.1%	19.3%	12.7%		12.7%			
Net margin (3)	3.5%	3.6%	3.5%	7.0%	(0.7)%		(0.7)%			
EBITDA (4)	₩ 4,795	₩ 4,880	₩ 4,410	₩ 5,579	₩ 3,476	US\$	3,124			
Capital expenditures	2,983	2,365	3,736	6,592	7,942		7,137			
Depreciation and amortization (5)	3,492	3,376	3,022	3,215	3,555		3,195			
Net cash provided by operating activities	2,865	2,727	3,641	6,764	4,484		4,029			
Net cash used in investing activities	(3,451)	(2,732)	(3,189)	(6,481)	(7,675)		(6,897)			
Net cash provided by (used in) financing activities	405	(174)	308	862	2,953		2,654			
Dividends declared per share (Won, US\$)(6)	₩ 500	₩ 500	₩ 500	₩ 500	_		_			

- (1) For convenience, the Korean Won amounts are expressed in U.S. dollars at the rate of \(\foat\)1,112.85 to US\\$1.00, the noon buying rate in effect on December 31, 2018 as certified by the Federal Reserve Bank of New York for customs purposes. This translation should not be construed as a representation that the Korean Won amounts represent, have been or could be converted to U.S. dollars at that rate or any other rate.
- (2) Gross margin represents gross profit divided by revenue.
- (3) Net margin represents profit (loss) for the year divided by revenue.
- (4) EBITDA is defined as profit (loss) for the year excluding interest expense, income tax expense, depreciation and amortization of intangible assets and interest income. EBITDA is a key financial measure used by our senior management to internally evaluate the performance of our business and for other required or discretionary purposes. Specifically, our significant capital assets are in different stages of depreciation, and because we do not have separate operating divisions, our senior management uses EBITDA internally to measure the performance of these assets on a comparable basis. We also believe that the presentation of EBITDA will enhance an investor's understanding of our operating performance as we believe it is commonly reported and widely used by analysts and investors in our industry. It also provides useful information for comparison on a more comparable basis of our operating performance and those of our competitors, who follow different accounting policies. For example, depreciation on most of our equipment is made based on a four-year useful life while most of our competitors use different depreciation schedules from our own. EBITDA is not a measure determined in accordance with IFRS. EBITDA should not be considered as an alternative to gross profit, cash flows from operating activities or profit (loss) for the year, as determined in accordance with IFRS. Our calculation of EBITDA may not be comparable to similarly titled measures reported by other companies. A reconciliation of profit (loss) for the year to EBITDA is as follows:

	Year ended December 31,								
	2014	2015	2016	2017	2018	201	18 (1)		
	· <u></u>	(in billions of Won) (in mill							
Profit (loss) for the year	₩ 917	₩1,023	₩ 931	₩1,937	₩ (179)	US\$	(161)		
Interest income	(49)	(57)	(42)	(60)	(69)		(62)		
Interest expense	110	128	115	91	81		73		
Income tax expense	325	411	385	396	88		79		
Depreciation	3,222	2,969	2,643	2,792	3,124		2,807		
Amortization of intangible assets	270	406	378	423	431		387		
EBITDA	W 4,795	W 4,880	W 4,410	₩5,579	₩3,476	US\$	3,124		

- (5) Includes amortization of intangible assets.
- (6) Dividends declared per share represent cash dividends declared for the year divided by outstanding shares of common stock as of December 31.

Operating data

2010
2018
51,966
30,471
36,693
25,015
105,142
249,287

- Includes semi-finished products manufactured by our former joint venture company LUCOM Display Technology (Kunshan) Ltd. through June 2014 when we
 disposed of our entire investment in such company.
- (2) Includes desktop monitors manufactured and sold by our joint venture company L&T Display Technology (Fujian) Limited.
- (3) Includes, among others, panels for mobile devices, including smartphones and other types of mobile phones, and industrial and other applications, including entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment.

		Year ended December 31,					
	2014	2015	2016	2017	2018	2	018(4)
		(in billions of Won)				(in millions of US\$)	
Revenue by product category:							
Televisions	₩ 10,540	₩ 10,854	₩ 10,133	₩11,718	₩ 9,727	US\$	8,741
Notebook computers(1)	2,669	2,509	2,384	2,244	2,837		2,549
Desktop monitors ⁽²⁾	4,660	4,553	4,035	4,393	4,040		3,630
Tablet computers	3,542	2,510	2,696	2,370	1,991		1,789
Mobile and other applications ⁽³⁾	5,005	7,919	7,216	7,020	5,699		5,121
Total sales of goods	W 26,416	₩ 28,345	W 26,464	W 27,745	W 24,294	US\$	21,830
Royalties	15	19	17	20	18		16
Others	25	20	23	25	25		23
Revenue	₩ 26,456	₩ 28,384	₩ 26,504	W 27,790	₩ 24,337	US\$	21,868

⁽¹⁾ Includes semi-finished products manufactured by our former joint venture company LUCOM Display Technology (Kunshan) Ltd. through June 2014 when we disposed of our entire investment in such company.

Item 3.B. Capitalization and Indebtedness

Not applicable.

⁽²⁾ Includes desktop monitors manufactured and sold by our joint venture company L&T Display Technology (Fujian) Limited.

⁽³⁾ Includes, among others, panels for mobile devices, including smartphones and other types of mobile phones, and industrial and other applications, including entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment.

⁽⁴⁾ For convenience, the Korean Won amounts are expressed in U.S. dollars at the rate of \(\pm\)1,112.85 to \(\pm\)S\$1.00, the noon buying rate in effect on December 31, 2018 as certified by the Federal Reserve Bank of New York for customs purposes. This translation should not be construed as a representation that the Korean Won amounts represent, have been or could be converted to U.S. dollars at that rate or any other rate.

Item 3.C. Reasons for the Offer and Use of Proceeds

Not applicable.

Item 3.D. Risk Factors

You should carefully consider the risks described below.

Risks Relating to Our Industry

The display panel industry is subject to cyclical fluctuations, including recurring periods of capacity increases, that may adversely affect our results of operations.

Most of the global supply of display panels is currently manufactured based on thin-film transistor liquid crystal display, or TFT-LCD, technology. Display panel manufacturers are vulnerable to cyclical market conditions. Intense competition and expectations of growth in demand across the display panel industry may cause manufacturers to make additional investments in manufacturing capacity on similar schedules, resulting in a surge in capacity when production is ramped up at new fabrication facilities. During such surges in capacity growth, as evidenced by past experiences, customers can exert strong downward pricing pressure, resulting in sharp declines in average selling prices and significant fluctuations in the panel manufacturers' gross margins. Conversely, demand surges and fluctuations in the supply chain can lead to price increases.

From time to time, we have been affected by overcapacity in the display panel industry relative to the general demand for such panels which, together with uncertainties in the current global economic environment, has contributed to a general decline in the average selling prices of a number of our display panel products. Our average revenue per square meter of net display area, which is derived by dividing our total revenue by total square meters of net display area shipped, increased by 3.5% from \text{W}645,222 in 2016 to \text{W}667,726 in 2017, which primarily reflected an increase in the proportion of higher margin products utilizing more advanced technologies in our overall product mix, coupled with the effects of a temporary surge in market demand for large-sized panels in the first half of 2017, but decreased by 13.6% to \text{W}576,817 (US\$518) in 2018, which was largely driven by an increase in the supply capacity of global TFT-LCD panel manufacturers that applied downward pricing pressure.

We attempt to counteract, at least in part, the effects of overcapacity in the industry by increasing the proportion of high margin, differentiated specialty products based on newer technologies in our product mix, including products that utilize organic light-emitting diode, or OLED, technology, which are relatively less affected by the industry-wide overcapacity problems affecting display panel products using older technologies, while also engaging in cost reduction efforts.

While we believe that overcapacity and other cyclical issues in the industry are best addressed by increasing the proportion of high margin, differentiated specialty products based on newer technologies (such as OLED technology) in our product mix that are tailored to our customers' evolving needs, we also address overcapacity issues by, in the short-term, adjusting the utilization rates of our existing fabrication facilities based on our assessment of industry inventory levels and demand for our products and, in the mid- to long-term, by fine-tuning our investment strategies relating to product development and capacity growth in light of our assessment of future market conditions.

However, we cannot provide any assurance that an increase in demand, which helped to mitigate the impact of industry-wide overcapacity in the past, can be sustained in future periods. We will therefore continue to closely monitor the overcapacity issues in the industry and respond accordingly. However, construction of new fabrication facilities and other capacity expansion projects in the display panel industry are undertaken with a multi-year time horizon based on expectations of future market trends. Therefore, even if overcapacity issues persist in the industry, there may be continued capacity expansion in the near future due to pre-committed capacity expansion projects in the industry that were undertaken in past years. Any significant industry-wide capacity increases that are not accompanied by a sufficient increase in demand could further drive down the average selling price of our panels, which would negatively affect our gross margin. Any decline in prices may be further compounded by a seasonal weakening in demand growth for end products such as personal computer products, consumer electronics products and mobile and other application products. Furthermore, once the differentiated products that had a positive impact on our performance mature in their technology cycle, if we are not able to develop and commercialize newer products to offset the price erosion of such maturing products in a timely manner, our ability to counter the impact of cyclical market conditions on our gross margins would be further limited. We cannot provide assurance that any future downturns resulting from any large increases in capacity or other factors affecting the industry would not have a material adverse effect on our business, financial condition and results of operations.

A global economic downturn may result in reduced demand for our products and adversely affect our profitability.

In recent years, adverse conditions and volatility in the worldwide financial markets, fluctuations in oil and commodity prices and the general weakness of the global economy have contributed to the uncertainty of global economic prospects in general and have adversely affected, and may continue to adversely affect, the Korean economy. Global economic downturns in the past have adversely affected demand for consumer products manufactured by our customers in Korea and overseas, including televisions, notebook computers, desktop monitors, tablet computers and mobile and other application products utilizing display panels, which in turn led them to reduce or plan reductions of their production.

The overall prospects for the global economy remain uncertain. We cannot provide any assurance that demand for our products can be sustained at current levels in future periods or that the demand for our products will not decrease again in the future due to such economic downturns which may adversely affect our profitability. We may decide to adjust our production levels in the future subject to market demand for our products, the production outlook of the global display panel industry, in particular, the display panel industry, and global economic conditions in general. Any decline in demand for display panel products may adversely affect our business, results of operations and/or financial condition.

Our industry continues to experience steady declines in the average selling prices of display panels irrespective of cyclical fluctuations in the industry, and our margins would be adversely impacted if prices decrease faster than we are able to reduce our costs.

The average selling prices of display panels have declined in general and are expected to continually decline with time irrespective of industry-wide cyclical fluctuations as a result of, among other factors, technological advancements and cost reductions. Although we may be able to take advantage of the higher selling prices typically associated with new products and technologies when they are first introduced in the market, such prices decline over time, and in certain cases, very rapidly, as a result of market competition or otherwise. If we are unable to effectively anticipate and counter the price erosion that accompanies our products, or if the average selling prices of our display panels decrease faster than the speed at which we are able to reduce our manufacturing costs, our gross margin would decrease and our results of operations and financial condition may be materially and adversely affected.

We operate in a highly competitive environment and we may not be able to sustain our current market position.

The display panel industry is highly competitive. We have experienced pressure on the prices and margins of our major products due largely to additional capacity from panel makers in Korea, Taiwan, China and Japan. Our main competitors in the industry include Samsung Display, Innolux, AU Optronics, BOE, China Star Optoelectronics Technology, CEC Panda, HKC, JDI and Sharp.

Some of our competitors may currently, or at some point in the future, have greater financial, sales and marketing, manufacturing, research and development or technological resources than we do. In addition, our competitors may be able to manufacture panels on a larger scale or with greater cost efficiencies than we do, and we anticipate increases in production capacity in the future by other display panel manufacturers using similar display panel technologies as ours. Any price erosion resulting from strong global competition or additional industry capacity may materially adversely affect our financial condition and results of operations.

Consolidation within the industry in which we operate may result in increased competition as the entities emerging from such consolidation may have greater financial, manufacturing, research and development and other resources than we do, especially if such mergers or consolidations result in vertical integration and operational efficiencies. Increased competition resulting from such mergers or consolidations may lead to decreased margins, which may have a material adverse effect on our financial condition and results of operations.

Our ability to compete successfully also depends on factors both within and outside our control, including product pricing, performance and reliability, our relationship with customers, successful and timely investment and product development, success or failure of our end-brand customers in marketing their brands and products, newly established industry standards, component and raw material supply costs, and general economic and industry conditions. We cannot provide assurance that we will be able to maintain a competitive advantage with respect to all these factors and, as a result, we may be unable to sustain our current market position.

Our operating results fluctuate from period to period, so you should not rely on period-to-period comparisons to predict our future performance.

Our industry is affected by market conditions that are often outside the control of manufacturers. Our results of operations may fluctuate significantly from period to period due to a number of factors, including seasonal variations in consumer demand, capacity ramp-up by competitors, industry-wide technological changes, the loss of a key customer and the postponement, rescheduling or cancellation of large orders by a key customer, any of which may or may not reflect a continued trend from one period to the next. As a result of these factors and other risks discussed in this section, you should not rely on period-to-period comparisons to predict our future performance.

Risks Relating to Our Company

Our financial condition may be adversely affected if we cannot introduce new products to adapt to rapidly evolving customer needs on a timely basis.

Our success will depend greatly on our ability to respond quickly to rapidly evolving customer requirements and to develop and efficiently manufacture new and differentiated products in anticipation of future demand. A failure or delay on our part to develop and efficiently manufacture products of such quality and technical specifications that meet our customers' evolving needs may adversely affect our business.

Close cooperation with our customers to gain insights into their product needs and to understand general trends in the end-product market is a key component of our strategy to produce successful products. In addition, when developing new products, we often work closely with equipment suppliers to design equipment that will make our production processes for such new products more efficient. If we are unable to work together with our customers and equipment suppliers, or to sufficiently understand their respective needs and capabilities or general market trends, we may not be able to introduce or efficiently manufacture new products in a timely manner, which may have a material adverse effect on our financial situation.

In addition, product differentiation, especially the ability to develop and market differentiated specialty products that command higher premiums in a timely manner, has become a key competitive strategy in the display panel market. This is in part due to trends in consumer electronics and other markets, such as televisions, tablet computers and mobile devices, where the growth in demand is led by end products employing newer technologies with specifications tailored to deliver enhanced performance, convenience and user experience in a cost-efficient and timely manner. Accordingly, we have focused our efforts on developing and marketing differentiated specialty products, such as OLED display panels for televisions and public displays including "Wallpaper" OLED panels, "Crystal Sound OLED" sound integrated panels and rollable OLED display panels. We also strive to deliver differentiated values to meet our consumers' demand for various display panels including (i) panels utilizing ultra-high definition, or Ultra HD, technology with oxide backplanes, (ii) Advanced High-Performance In-Plane Switching, or AH-IPS, panels for tablet computers, mobile devices, notebook computers, desktop monitors, and (iii) plastic OLED display panels for smartphones and other wearable devices. We have also focused our efforts on cost reductions in the production process, in particular of panels with newer technologies, such as OLED, in order to improve or maintain our profit margins while offering competitive prices to our customers.

We have developed differentiated sales and marketing strategies to promote our panels for differentiated specialty products as part of our strategy to grow our operations to meet increasing demand for new applications in consumer electronics and other markets. However, we cannot provide assurance that the differentiated products we develop and market will be responsive to our end customers' needs nor that our products will be successfully incorporated into end products or new applications that lead market growth in consumer electronics or other markets.

Problems with product quality, including defects, in our products could result in a decrease in customers and sales, unexpected expenses and loss of market share.

Our products are manufactured using advanced, and often new, technology and must meet stringent quality requirements. Products manufactured using advanced and new technology, such as ours, may contain undetected errors or defects, especially when first introduced. For example, our latest display panels may contain defects that are not detected until after they are shipped or installed because we cannot test for all possible scenarios. Such defects could cause us to incur significant re-designing costs, divert the attention of our technology personnel from product development efforts and significantly affect our customer relations and business reputation. In addition, future product failures could cause us to incur substantial expense to repair or replace defective products. We recognize a provision for warranty obligations based on the estimated costs that we expect to incur under our basic limited warranty for our products, which covers defective products and is normally valid for 18 months from the date of purchase by our customers. The warranty provision is largely based on historical and anticipated rates of warranty claims, and therefore we cannot provide assurance that the provision would be sufficient to cover any surge in future warranty expenses that significantly exceed historical and anticipated rates of warranty claims. In addition, if we deliver products with errors or defects, or if there is a perception that our products contain errors or defects, our credibility and the market acceptance and sales of our products could be harmed. Widespread product failures may damage our market reputation and reduce our market share and cause our sales to decline.

We sell our products to a select group of key customers, including our largest shareholder and its affiliates, and any significant decrease in their order levels or material deterioration in their financial condition will negatively affect our financial condition and results of operations.

A substantial portion of our sales is attributable to a limited group of end-brand customers and their designated system integrators. Sales attributed to our end-brand customers are for their end-brand products and do not include sales to these customers for their system integration activities for other end-brand products, if any. Our top ten end-brand customers, including LG Electronics Inc., our largest shareholder, together accounted for a substantial majority of our sales in each of 2016, 2017 and 2018.

We benefit from the strong collaborative relationships we maintain with our end-brand customers by participating in the development of their products and gaining insights about levels of future demand for our products and other industry trends. Customers look to us for a dependable supply of quality products, even during downturns in the industry, and we benefit from the brand recognition of our customers' end products. The loss of these end-brand customers, as a result of their entering into strategic supplier arrangements with our competitors or otherwise, would thus result not only in reduced sales, but also in the loss of these benefits. We cannot provide assurance that a select group of key end-brand customers, including our largest shareholder, will continue to place orders with us in the future at the same levels as in prior periods, or at all.

We expect that we will continue to be dependent upon LG Electronics and its affiliates for a significant portion of our revenue for the foreseeable future. See "Item 7.B. Related Party Transactions" for a description of these related party transactions with LG Electronics and its affiliates. Our results of operations and financial condition could therefore be affected by the overall performance of LG Electronics and its affiliates.

Furthermore, although we have not experienced any material problems relating to customer payments to date, as a result of our significant dependence on a concentrated group of end-brand customers and their designated system integrators, as well as the sales we make to our affiliated trading company, LG International Corp., and its subsidiaries, we are exposed to credit risks associated with these entities.

Consolidation and other changes at our end-brand customers could cause sales of our products to decline.

Mergers, acquisitions, divestments or consolidations involving our end-brand customers can present risks to our business, as management at the new entity may change the way they do business, including their transactions with us, or may decide not to use us as one of their suppliers of display panels. In addition, we cannot provide assurance that a combined entity resulting from a merger, acquisition or consolidation or a newly formed entity resulting from a divestment will continue to purchase display panels from us at the same level, if at all, as each entity purchased in the aggregate when they were separate companies or that a divested company will purchase panels from us at the same level, if at all, as prior to the divestment.

Our results of operations depend on our ability to keep pace with changes in technology.

Advances in technology typically lead to rapid declines in sales volumes for products made with older technologies and may lead to these products becoming less competitive in the marketplace, or even obsolete. As a result, we will likely be required to make significant expenditures to develop or acquire new process and product technologies, along with corresponding manufacturing capabilities. For example, in addition to introducing television display panels utilizing OLED technology, we have also developed OLED panels with embedded sound systems that function as speakers while maintaining a slim design. Furthermore, we began production of plastic OLED panels for mobile and other applications on our E5 production line in August 2017.

With the addition of "8K" 88-inch OLED televisions to the line-up of available products in the first half of 2019, following the prior launch of 55-inch, 65-inch and 77-inch OLED televisions, we are deploying greater resources into OLED panel fabrication capabilities in order to maintain our competitive edge in the OLED television panel market. We are also deploying significant resources into plastic OLED panels for mobile and other applications in order to expand our market presence. Our ability to develop differentiated products with new display technologies and utilize advanced manufacturing processes to increase production yields while lowering production cost will be critical to our sustained competitiveness. However, we cannot provide assurance that we will be able to continue to successfully develop new products or manufacturing processes through our research and development efforts or through obtaining technology licenses, or that we will keep pace with technological changes in the marketplace.

Our revenue depends on continuing demand for televisions, notebook computers, desktop monitors, tablet computers and mobile and other application products with panels of the type we produce. Our sales may not grow at the rate we expect if consumers do not purchase these products.

Currently, our total sales are derived principally from customers who use our products in televisions, notebook computers, desktop monitors, tablet computers and mobile and other application products with display devices. In particular, a substantial percentage of our sales is derived from end-brand customers, or their designated system integrators, who use our panels in their televisions, which accounted for 38.2%, 42.2% and 40.0% of our total revenue in 2016, 2017 and 2018, respectively. A substantial portion of our sales is also derived from end-brand customers, or their designated system integrators, who use our panels in their notebook computers, which accounted for 9.0%, 8.1% and 11.7% of our total revenue in 2016, 2017 and 2018, respectively, those who use our panels in their desktop monitors, which accounted for 15.2%, 15.8% and 16.6% of our total revenue in 2016, 2017 and 2018, respectively, those who use our panels in their tablet computers, which accounted for 10.2%, 8.5% and 8.2% of our total revenue in 2016, 2017 and 2018, respectively, and those who use our panels in their mobile and other applications, which accounted for 27.2%, 25.3% and 23.4% of our total revenue in 2016, 2017 and 2018, respectively. Although the degree to which our total sales are dependent on sales of television panels has fluctuated in recent years, television panels remain our largest product category in terms of revenue and we will therefore continue to be dependent on continuing demand from the television industry. In addition, we will continue to be dependent on continuing demand from the personal computer industry, the tablet computer industry and the mobile device industry for a substantial portion of our sales. Any downturn in any of those industries in which our customers operate would result in reduced demand for our products, which may in turn result in reduced revenue, lower average selling prices and/or reduced margins.

The emergence of OLED technology as an alternative to panels with TFT-LCD technology may erode sales of our TFT-LCD panels, which may have a material adverse effect on our financial condition and results of operations.

While our revenue and sales volume is predominantly derived from the sale of display panels with TFT-LCD technology, new display technologies, such as OLED technology, are at various stages of development and production by us and other display panel makers. OLED technology is widely seen in the display industry as a successor technology to TFT-LCD technology and is gaining wider market acceptance for use in display panels for televisions, smartphones and tablet computers, and industrial and other applications, including public displays, entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment. We have recognized the importance and potential of OLED technology and have in recent years engaged in research and development and invested in production facilities to develop and commercialize OLED panels for small-, medium- and large-sized products. We have been producing OLED panels for televisions on our E3 and E4 production lines since 2013 and 2014, respectively, and OLED panels for smartphones on our E2 production lines since 2013. We also began production of plastic OLED panels on our E5 production line in August 2017 and are in the process of constructing our new E6 production lines for plastic OLED panels, in each case for mobile and other applications.

Our early efforts in developing and commercializing OLED technology were recognized by the Society for Information Display, a display panel industry group, when we were awarded a Best in Show Award in May 2016 for our 77-inch OLED television panels. We were also awarded a Best of Consumer Electronics Show Award by the Consumer Electronics Association in January 2016 for our 77-inch OLED television panels and a Best Product in EISA Award by the European Imaging and Sound Association in September 2016 for our 65-inch OLED television panels. In May 2017 and May 2018, we were awarded the Display of the Year Award by the Society for Information Display for our 65-inch Wallpaper OLED television panels and our Ultra HD Crystal Sound OLED technology, respectively. In January 2019, we won multiple awards for our 65-inch rollable OLED television panels at the 2019 Consumer Electronics Show. While we strive to maintain our early competitive edge in the market for OLED panels, the market for OLED panels is still relatively small compared to the market for TFT-LCD panels, and we expect competition will intensify in the future. In addition, the speed at which we achieve cost reduction for our OLED technology-based new products or at which significant demand for such products develops may be slower than our current expectations.

As OLED panels continue to gain market acceptance as an alternative to TFT-LCD panels, if we are unable to continue to develop and commercialize OLED technology in a commercially viable and timely manner to offset declining sales of our TFT-LCD panels, or if customers prefer panels developed and manufactured by our competitors utilizing competing types of OLED technologies, this would have a material adverse effect on our financial condition and results of operations. See also "—We operate in a highly competitive environment and we may not be able to sustain our current market position." above.

We will have significant capital requirements in connection with our business strategy and if capital resources are not available we may not be able to implement our strategy and future plans.

In connection with our strategy to further enhance the diversity and capacity of our display panel production, we anticipate that we will continue to incur significant capital expenditures for the construction of new production facilities and the maintenance and enhancement of existing production facilities, particularly in connection with our continued investments in OLED technology. Our significant recent and pending capital expenditures include the following:

- In response to and in anticipation of growing demand in the China market, in July 2017, we announced our plan to establish a joint venture with the government of Guangzhou to construct a new large-sized OLED production line, which was established under the name of LG Display High-Tech (China) Co., Ltd., in July 2018. We currently hold a 69% ownership interest in the joint venture and the government of Guangzhou holds the remaining 31% ownership interest. We plan to invest approximately \(\forall \text{5.0}\) trillion in capital expenditures for the joint venture, which is expected to commence production within 2019, subject to market conditions and any changes in our investment timetable.
- In anticipation of growing demand for OLED panels, in July 2015 and July 2016, we announced plans for our new E5 and E6 production lines, respectively. We have commenced mass production of plastic OLED panels on our E5 production line beginning in August 2017 and are in the process of constructing our new E6 production line for plastic OLED panels with a target to commence mass production during 2019, subject to market conditions and any changes in our investment timetable.
- In July 2017, we announced plans to make investments in an aggregate amount of up to \(\pi\)7.8 trillion in new large-size OLED and plastic production lines in Paju, Korea. We are in the process of developing and assessing the specifics of such planned investments, including the timing.
- In April 2016, we entered into a memorandum of understanding with the City of Haiphong in Vietnam for their administrative assistance with building our new module assembly facility in Haiphong, which commenced production in July 2017.

In 2018, our total capital expenditure on a cash out basis amounted to \$\foatstyle{\psi}7.9\$ trillion. We currently expect that, in 2019, our total capital expenditures on a cash out basis will be at a similar level to 2018, primarily to fund our previously announced investments related to facilities for OLED panels. This amount is subject to periodic assessment, and we cannot provide any assurance that this amount may not change materially after assessment.

These capital expenditures will be made well in advance of any additional sales that will be generated from these expenditures. However, in the event of adverse market conditions, or if our actual expenditures far exceed our planned expenditures, our external financing activities combined with our internal sources of liquidity may not be sufficient to carry out our current and future operational plans, and we may decide not to expand the capacity of certain of our facilities or construct new production facilities as scheduled or at all. Our ability to obtain additional financing will depend upon a number of factors outside our control, including general economic, financial, competitive, regulatory and other considerations.

In the past, difficulties affecting the global financial sectors, adverse conditions and volatility in the worldwide credit and financial markets, fluctuations in oil and commodity prices and the general weakness of the global economy have increased the uncertainty of global economic prospects in general and have adversely affected the global and Korean economies. Because we rely on financing both within and outside of Korea from time to time, difficulties affecting the global and Korean economies, including any increase in market volatility and their lingering effects, could adversely affect our ability to obtain sufficient financing on commercially reasonable terms. The failure to obtain sufficient financing on commercially reasonable terms to complete our expansion plans could delay or impair our ability to pursue our business strategy, which could materially and adversely affect our business and results of operations.

Our manufacturing processes are complex and periodic improvements to increase efficiency can expose us to potential disruptions in operations.

The manufacturing processes for TFT-LCD, OLED and other display products are highly complex, requiring sophisticated and costly equipment that is periodically modified and upgraded to improve manufacturing yields and product performance, and reduce unit manufacturing costs. These updates expose us to the risk that from time to time production difficulties will arise that could cause delivery delays, reduced output or both. We cannot provide assurance that we will not experience manufacturing problems in achieving acceptable output, product delivery delays or both as a result of, among other factors, construction delays, difficulties in upgrading or modifying existing production lines or building new plants, difficulties in modifying existing or adopting new manufacturing line technologies or processes or delays in equipment deliveries, any of which could constrain our capacity and adversely affect our results of operations.

We may be unable to successfully execute our growth strategy or manage and sustain our growth on a timely basis, if at all, and, as a result, our business may be harmed.

We have experienced, and expect to continue to experience, rapid growth in the scope and complexity of our operations due to the building of new fabrication facilities and the expansion and conversion of existing fabrication facilities to meet the evolving and anticipated demands of our customers. For example, we established our E5 production line and commenced mass production of plastic OLED panels for mobile and other applications in August 2017. See "Item 4.D. Property, Plants and Equipment—Current Facilities." With respect to our overseas facilities in recent years, we commenced mass production of large-sized panels at our GP fabrication facility in Guangzhou, China in September 2014. In response to and in anticipation of growing demand in the China market, in July 2018, we established and acquired a 69% ownership interest in, a joint venture with the government of Guangzhou to construct a next generation large-sized OLED production line in Guangzhou, China. Production at the joint venture is expected to commence during 2019, and we plan to invest approximately \(\psi 5.0\) trillion in the joint venture. See also "—We will have significant capital requirements in connection with our business strategy and if capital resources are not available we may not be able to implement our strategy and future plans." above.

Sustained growth in the scope and complexity of our operations may strain our managerial, financial, manufacturing and other resources. We may experience manufacturing difficulties in starting new production lines, upgrading existing facilities or building new plants as a result of cost overruns, construction delays or shortages of, or quality problems with, materials, labor or equipment, any of which could result in a loss of future revenue. We may also incur opportunity costs if we misjudge the anticipated demand for certain display panel products and allocate our limited resources in increasing production capacity for such display panel products at the cost of maintaining existing or increasing production capacity of other display panel products that turn out to be more popular. In addition, failure to keep up with our competitors in future investments in next-generation panel fabrication facilities or in the upgrading of manufacturing capacity of existing facilities would impair our ability to effectively compete within the display panel industry. Failure to obtain intended economic benefits from expansion projects could adversely affect our business, financial condition and results of operations.

If we cannot maintain high capacity utilization rates, our profitability will be adversely affected.

The production of display panels entails high fixed costs resulting from considerable expenditures for the construction of complex fabrication and assembly facilities and the purchase of costly equipment, particularly for productions involving new technologies, such as OLED. We aim to maintain high capacity utilization rates so that we can allocate these fixed costs over a greater number of panels produced and realize a higher gross margin. However, due to any number of reasons, including fluctuating demand for our products or overcapacity in the display industry, we may need to reduce production, resulting in lower-than-optimal capacity utilization rates. As such, we cannot provide assurance that we will be able to sustain our capacity utilization rates in the future nor can we provide assurance that we will not reduce our utilization rates in the future as market and industry conditions change.

Limited availability of raw materials, components and manufacturing equipment could materially and adversely affect our business, results of operations or financial condition.

Our production operations depend on obtaining adequate supplies of quality raw materials and components on a timely basis. As a result, it is important for us to control our raw material and component costs and reduce the effects of fluctuations in price and availability. In general, we source most of our raw materials as well as key components, such as glass substrates, driver integrated circuits and polarizers used in both our TFT-LCD and OLED products, backlight units and liquid crystal materials used in our TFT-LCD products and hole transport materials and emission materials used in our OLED products, from two or more suppliers for each key component. However, we may establish a working relationship with a single supplier if we believe it is advantageous to do so due to performance, quality, support, delivery, capacity, price or other considerations. We may experience shortages in the supply of these key components, as well as other components or raw materials, as a result of, among other things, anticipated capacity expansion in the display industry or our dependence on a limited number of suppliers. Our results of operations would be adversely affected if we were unable to obtain adequate supplies of high-quality raw materials or components in a timely manner or make alternative arrangements for such supplies in a timely manner.

Furthermore, we may be limited in our ability to pass on increases in the cost of raw materials and components to our customers. We do not typically enter into binding long-term contracts with our customers, and even in those cases where we do enter into long-term agreements with certain of our major end-brand customers, the price terms are contained in the purchase orders which are generally placed by them several weeks in advance of delivery. Except under certain special circumstances, the price terms in the purchase orders are not subject to change. Prices for our products are generally determined through negotiations with our customers, based generally on the complexity of the product specifications and the labor and technology involved in the design or production processes. However, if we become subject to any significant increase in the cost of raw materials or components that were not anticipated when negotiating the price terms after the purchase orders have been placed, we may be unable to pass on such cost increases to our customers.

We have purchased, and expect to purchase, a substantial portion of our equipment from a limited number of qualified foreign and local suppliers. From time to time, increased demand for new equipment may cause lead times to extend beyond those normally required by the equipment vendors. The unavailability of equipment, delays in the delivery of equipment, or the delivery of equipment that does not meet our specifications, could delay implementation of our expansion plans and impair our ability to meet customer orders. This could result in a loss of revenue and cause financial stress on our operations.

Earthquakes, tsunamis, floods and other natural calamities could materially adversely affect our business, results of operations or financial condition.

If earthquakes, tsunamis, floods or any other natural calamities were to occur in the future in any area where any of our assets, suppliers or customers are located, our business, results of operations or financial condition could be adversely affected. A number of suppliers of our raw materials, components and manufacturing equipment, as well as customers of our products, are located in countries which have suffered natural calamities such as earthquakes and tsunamis in the recent past, such as Japan and Taiwan. Any occurrence of such natural calamities in Japan or any other countries where our suppliers are located may lead to shortages or delays in the supply of raw materials, components or manufacturing equipment. In addition, natural calamities in areas where our customers are located, including Japan, may cause disruptions in their businesses, which in turn could adversely impact their demand for our products.

Advance purchase orders from our customers vary in volume from period to period, and we operate with a modest inventory, which may make it difficult for us to efficiently allocate capacity on a timely basis in response to changes in demand.

Our major customers and their designated system integrators provide us with advance rolling forecasts of their product requirements. However, firm orders are not placed until negotiations on purchase prices are subsequently finalized a few weeks prior to delivery. As a result, firm orders may be less than anticipated based on these prior forecasts. Due to the cyclicality of the display industry, purchase order levels from our customers have varied from period to period. Although we typically operate with an inventory level estimated for several weeks, it may be difficult for us to adjust production costs or to allocate production capacity in a timely manner to compensate for any such volatility in order volumes. Our inability to respond quickly to changes in overall demand for display products as well as changes in product mix and specifications may result in lost revenue, which would adversely affect our results of operations.

We may experience losses on inventories.

Frequent new product introductions in the computer and consumer electronics industries can result in a decline in the average selling prices of our display panels and the obsolescence of our existing display panel inventory. This can result in a decrease in the stated value of our panel inventory, which we value at the lower of cost or market value.

We manage our inventory based on our customers' and our own forecasts and typically operate with an inventory level estimated for several weeks. Although adjustments are regularly made based on market conditions, we typically deliver our goods to the customers within several weeks after a firm order has been placed. While we maintain open channels of communication with our major customers to avoid unexpected decreases in firm orders or subsequent changes to placed orders, and try to minimize our inventory levels, such actions by our customers may have an adverse effect on our inventory management.

Sanctions or judgments against us and other TFT-LCD panel producers for possible anti-competitive activities may have a direct and indirect material impact on our operations.

In December 2006, LG Display received notices of investigation by the U.S. Department of Justice, the European Commission, the Korea Fair Trade Commission and the Japan Fair Trade Commission with respect to possible anti-competitive activities in the TFT-LCD industry. Subsequently, the Competition Bureau of Canada, the Secretariat of Economic Law of Brazil, the Taiwan Fair Trade Commission and the Federal Competition Commission of Mexico announced investigations regarding the same. Between November 2008 and June 2014, each of such investigations and subsequent legal proceedings brought by the relevant competition authorities was settled or resolved, and we have paid fines of US\$400 million pursuant to our November 2008 settlement agreement with the U.S. Department of Justice, ϵ 210 million pursuant to a December 2010 decision by the European Commission and R\$33.9 million pursuant to an August 2014 settlement agreement with the Secretariat of Economic Law of Brazil.

After the commencement of the U.S. Department of Justice investigation, various class action complaints and separate claims by direct and indirect purchasers of our products were filed against us and other TFT-LCD panel manufacturers in the United States and Canada, alleging violation of respective antitrust and related laws. In addition, from 2010 to 2012, the attorneys general of Arkansas, California, Florida, Illinois, Michigan, Mississippi, Missouri, New York, Oklahoma, Oregon, South Carolina, Washington, West Virginia and Wisconsin filed complaints against us, alleging similar antitrust violations. In June 2018, the attorney general of the Commonwealth of Puerto Rico filed a complaint against us and other TFT-LCD panel manufacturers alleging unjust enrichment in connection with the aforementioned U.S. Department of Justice investigation. Since then, we have reached settlements with each of the plaintiff classes and separate plaintiffs, as well as with the aforementioned state attorneys general, with the exception of the attorney general of the Commonwealth of Puerto Rico, which settlements were duly approved by the applicable courts and, in the case of the state attorneys general actions, by their respective state governments. As of April 24, 2019, we have not been served with the complaint from the attorney general of the Commonwealth of Puerto Rico.

A number of claims alleging damages were filed against LG Display and other entities in the United Kingdom as follow-on claims from the above-described European Commission's decision in December 2010, comprising claims by iiyama (UK) Limited and its affiliates ("iiyama") in December 2014, and Argos Limited and others ("Argos"), Granville Technology Group and others ("Granville") and Ingram Micro and others ("Ingram"), each in December 2016. As of April 24, 2019, we are vigorously defending ourselves against claims by Granville and iiyama. Ingram discontinued its claims against LG Display in June 2017, and we have reached a settlement with Argos in November 2018.

In December 2013, a class action complaint was filed by Hatzlacha, a consumer organization, on behalf of Israeli consumers against LG Display and other defendants in the Central District in Israel. In July 2017, the Supreme Court of Israel ruled in favor of the defendants to affirm the District Court's decision to revoke the leave to serve the class action on the defendants outside the jurisdiction of Israel. In August 2017, Hatzlacha filed a number of motions to uphold service in the Central District in Israel under different legal grounds, which are currently being contested by the defendants.

In each of the foregoing matters that are ongoing, we are continually evaluating the merits of the respective claims and vigorously defending ourselves. Irrespective of the validity or the successful assertion of the claims described above, we may incur significant costs with respect to litigating or settling any or all of the asserted claims. See "Item 8.A. Consolidated Statements and Other Financial Information—Legal Proceedings—Antitrust and Others" for a description of these matters. While we continue to vigorously defend the various proceedings described above, it is possible that one or more proceedings may result in cash outflow to settle or resolve these claims. We recognize provisions with respect to those legal claims in which our management has concluded that there is a present or constructive obligation arising from a past event, it is more likely than not that an outflow of resources will result to settle the obligation, and a reliable estimate can be made of the amount of the obligation. As of December 31, 2018, we have not recognized any provisions with respect to any legal claims based on our management's assessment of the likely outcomes. However, the actual outcomes may be different from those estimated as of December 31, 2018 and may have an adverse effect on our operating results or financial condition.

We need to observe certain financial and other covenants under the terms of our debt obligations, the failure to comply with which would put us in default under such debt obligations.

We are subject to financial and other covenants, including maintenance of credit ratings and debt-to-equity ratios, under certain of our debt obligations. The documentation for such debt also contains negative pledge provisions limiting our ability to provide liens on our assets as well as cross-default and cross-acceleration clauses, which give related creditors the right to accelerate the amounts due under such debt if an event of default or acceleration has occurred with respect to our existing or future indebtedness, or if any material part of our indebtedness or indebtedness of our subsidiaries is capable of being declared payable before the stated maturity date. In addition, such covenants restrict our ability to raise future debt financing.

If we breach the financial or other covenants contained in the documentation governing our debt obligations, our financial condition will be adversely affected to the extent we are not able to cure such breaches, obtain a waiver from the relevant lenders or debtholders or repay the relevant debt.

We may be adversely affected by changes in LIBOR reporting practices or the method in which LIBOR is determined.

Certain financings extended to us are made at variable rates that use London Interbank Offered Rate ("LIBOR") as a benchmark for establishing the applicable interest rates. As of December 31, 2018, US\$2,262 million (\(\pmu\)2,518 billion) of our outstanding long-term borrowings (including current portions thereof) were indexed to LIBOR.

In an announcement on July 27, 2017, the Financial Conduct Authority of the United Kingdom ("FCA"), which is the competent authority for the regulation of benchmarks in the UK, advocated a transition away from reliance on LIBOR to alternative reference rates and stated that it would no longer persuade or compel banks to submit rates for the calculation of the LIBOR rates after 2021 (the "FCA Announcement"). The FCA Announcement formed part of ongoing global efforts to reform LIBOR and other major interest rate benchmarks. Some of these reforms are already effective, while others are still to be implemented or formulated.

At this time, the nature and overall timeframe of the transition away from LIBOR is uncertain and no consensus exists as to what rate or rates may become accepted alternatives to LIBOR. Any changes announced by the FCA, ICE Benchmark Administration Limited as the independent administrator of LIBOR or any other successor governance or oversight body, or future changes adopted by such body, in the method pursuant to which LIBOR or any other "benchmark" rates are determined as a result of international, national or other proposals for reform or other initiatives or investigations, or any further uncertainty in relation to the timing and manner of implementation of such changes, could have a material adverse effect on our financing costs. In particular, to the extent LIBOR is discontinued or is no longer quoted, the interest rates on our borrowings indexed to LIBOR will be determined using various alternative methods. Any of such alternative methods may result in interest payment obligations that are higher than, or that do not otherwise correlate over time with, the payments that would have been made on such borrowings if LIBOR were available in its current form.

Our results of operations are subject to exchange rate fluctuations.

There has been considerable volatility in foreign exchange rates in recent years, including rates between the Korean Won and the U.S. dollar and between the Korean Won and the Japanese Yen. To the extent that we incur costs in one currency and make sales in another, our profit margins may be affected by changes in the exchange rates between the two currencies.

Our sales of display panels are denominated mainly in U.S. dollars, whereas our purchases of raw materials are denominated mainly in U.S. dollars and Japanese Yen. The largest proportion of our expenditures on capital equipment are denominated in Korean Won and U.S. dollars. Accordingly, fluctuations in exchange rates, in particular between the U.S. dollar and the Korean Won as well as between the Japanese Yen and the Korean Won, affect our pre-tax income, and in recent years, the value of the Won relative to the U.S. dollar and Japanese Yen has fluctuated widely. Although a depreciation of the Korean Won against the U.S. dollar increases the Korean Won value of our export sales and enhances the price-competitiveness of our products in foreign markets in U.S. dollar terms, it also increases the cost of imported raw materials and components in Korean Won terms and our cost in Korean Won of servicing our U.S. dollar denominated debt. A depreciation of the Korean Won against the Japanese Yen increases the Korean Won cost of our Japanese Yen denominated purchases of raw materials and components and, to the extent we have any debt denominated in Japanese Yen, our cost in Korean Won of servicing such debt, but has relatively little impact on our sales as most of our sales are denominated in U.S. dollars. In addition, continued exchange rate volatility may also result in foreign exchange losses for us. Although a depreciation of the Korean Won against the U.S. dollar, in general, has a net positive impact on our results of operations that more than offsets the net negative impact caused by a depreciation of the Korean Won against the Japanese Yen, we cannot provide assurance that the exchange rate of the Korean Won against foreign currencies will not be subject to significant fluctuations, or that the impact of such fluctuations will not adversely affect the results of our operations.

Our business relies on our patent rights which may be narrowed in scope or found to be invalid or otherwise unenforceable.

Our success will depend, to a significant extent, on our ability to obtain and enforce our patent rights both in Korea and worldwide. The coverage claimed in a patent application can be significantly reduced before a patent is issued, either in Korea or abroad. Consequently, we cannot provide assurance that any of our pending or future patent applications will result in the issuance of patents. Patents issued to us may be subjected to further proceedings limiting their scope and may not provide significant proprietary protection or competitive advantage. Our patents also may be challenged, circumvented, invalidated or deemed unenforceable. In addition, because patent applications in certain countries generally are not published until more than 18 months after they are first filed, and because publication of discoveries in scientific or patent literature often lags behind actual discoveries, we cannot be certain that we were, or any of our licensors was, the first creator of inventions covered by pending patent applications, that we or any of our licensors will be entitled to any rights in purported inventions claimed in pending or future patent applications, or that we were, or any of our licensors was, the first to file patent applications on such inventions.

Furthermore, pending patent applications or patents already issued to us or our licensors may become subject to dispute, and any dispute could be resolved against us. For example, we may become involved in re-examination, reissue or interference proceedings and the result of these proceedings could be the invalidation or substantial narrowing of our patent claims. We also could be subject to court proceedings that could find our patents invalid or unenforceable or could substantially narrow the scope of our patent claims. In addition, depending on the jurisdiction, statutory differences in patentable subject matter may limit the protection we can obtain on some of our inventions.

Failure to protect our intellectual property rights could impair our competitiveness and harm our business and future prospects.

We believe that developing new products and technologies that can be differentiated from those of our competitors is critical to the success of our business. We take active measures to obtain international protection of our intellectual property by obtaining patents and undertaking monitoring activities in our major markets. However, we cannot assure you that the measures we are taking will effectively deter competitors from improper use of our proprietary technologies. Our competitors may misappropriate our intellectual property, disputes as to ownership of intellectual property may arise and our intellectual property may otherwise become known or independently developed by our competitors.

Any failure to protect our intellectual property could impair our competitiveness and harm our business and future prospects.

Our rapid introduction of new technologies and products may increase the likelihood that third parties will assert claims that our products infringe upon their proprietary rights.

The rapid technological changes that characterize our industry require that we quickly implement new processes and components with respect to our products. Often with respect to recently developed processes and components, a degree of uncertainty exists as to who may rightfully claim ownership rights in such processes and components. Uncertainty of this type increases the risk that claims alleging that such components or processes infringe upon third party rights may be brought against us. Although we take and will continue to take steps to ensure that our new products do not infringe upon third party rights, if our products or manufacturing processes are found to infringe upon third party rights, we may be subject to significant liabilities and be required to change our manufacturing processes or be prohibited from manufacturing certain products, which could have a material adverse effect on our operations and financial condition.

We may be required to defend against charges of infringement of patent or other proprietary rights of third parties. Although patent and other intellectual property disputes in our industry have often been settled through licensing or similar arrangements, such defense could require us to incur substantial expense and to divert significant resources of our technical and management personnel, and could result in our loss of rights to develop or make certain products or require us to pay monetary damages or royalties to license proprietary rights from third parties. Furthermore, we cannot be certain that the necessary licenses would be available to us on acceptable terms, if at all. Accordingly, an adverse determination in a judicial or administrative proceeding or failure to obtain necessary licenses could prevent us from manufacturing and selling certain of our products. Any such litigation, whether successful or unsuccessful, could result in substantial costs to us and diversions of our resources, either of which could adversely affect our business.

We rely on technology provided by third parties and our business will suffer if we are unable to renew our licensing arrangements with them.

From time to time, we have obtained licenses for patent, copyright, trademark and other intellectual property rights to process and device technologies used in the production of our display panels. We have entered into key licensing arrangements with third parties, for which we have made, and continue to make, periodic license fee payments. In addition, we also have cross-license agreements with certain other third parties. These agreements terminate upon the expiration of the respective terms of the patents. See "Item 5.C. Research and Development, Patents and Licenses, etc.—Intellectual Property—License Agreements."

If we are unable to renew our technology licensing arrangements on acceptable terms, we may lose the legal protection to use certain of the processes we employ to manufacture our products and be prohibited from using those processes, which may prevent us from manufacturing and selling certain of our products, including our key products. In addition, we could be at a disadvantage if our competitors obtain licenses for protected technologies on more favorable terms than we do.

In the future, we may also need to obtain additional patent licenses for new or existing technologies. We cannot provide assurance that these license agreements can be obtained or renewed on acceptable terms or at all, and if not, our business and operating results could be adversely affected.

We rely upon trade secrets and other unpatented proprietary know-how to maintain our competitive position in the display panel industry and any loss of our rights to, or unauthorized disclosure of, our trade secrets or other unpatented proprietary know-how could negatively affect our business.

We also rely upon trade secrets, unpatented proprietary know-how and information, as well as continuing technological innovation in our business. The information we rely upon includes price forecasts, core technology and key customer information. We enter into confidentiality agreements with each of our employees and consultants upon the commencement of an employment or consulting relationship. These agreements generally provide that all inventions, ideas, discoveries, improvements and copyrightable material made or conceived by the individual arising out of the employment or consulting relationship and all confidential information developed or made known to the individual during the term of the relationship is our exclusive property. We cannot provide assurance that these types of agreements will be fully enforceable, or that they will not be breached. We also cannot be certain that we will have adequate remedies for any such breach. The disclosure of our trade secrets or other know-how as a result of such a breach could adversely affect our business. Also, our competitors may come to know about or determine our trade secrets and other proprietary information through a variety of methods. Disputes may arise concerning the ownership of intellectual property or the applicability or enforceability of our confidentiality agreements, and there can be no assurance that any such disputes would be resolved in our favor.

Furthermore, others may acquire or independently develop similar technology, or if patents are not issued with respect to technologies arising from our research, we may not be able to maintain information pertinent to such research as proprietary technology or trade secrets and that could have an adverse effect on our competitive position within the display panel industry.

If our cybersecurity is breached, we may incur significant legal and financial exposure, damage to our reputation and a loss of confidence of our customers.

Our business involves the storage and transmission of confidential information relating to us as well as our customers and suppliers, and any breach in our cybersecurity could expose us to a risk of loss, the improper use or disclosure of such information, ensuing potential liability or litigation, any of which could harm our reputation and adversely affect our business. Although there has been no material instance where an unauthorized party was able to obtain access to our data or our customers' data, there can be no assurance that we will not be vulnerable to cyber-attacks in the future.

Our cybersecurity measures may also fail due to employee error, malfeasance or otherwise. Instituting appropriate access controls and safeguards across our information technology infrastructure is challenging. Furthermore, outside parties may attempt to fraudulently induce employees to disclose sensitive information in order to gain access to our data or our customers' data or accounts or may otherwise obtain access to such data or accounts. Because the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. If an actual or perceived breach of our cybersecurity occurs or the market perception of the effectiveness of our cybersecurity measures is adversely affected, we may incur significant legal and financial exposure, including legal claims and regulatory fines and penalties, damage to our reputation and a loss of confidence of our customers, which could have an adverse effect on our business, financial condition and results of operations.

We rely on key researchers and engineers, senior management and production facility operators, and the loss of the services of any such personnel or the inability to attract and retain them may negatively affect our business.

Our success depends to a significant extent upon the continued service of our research and development and engineering personnel, and on our ability to continue to attract, retain and motivate qualified researchers and engineers, especially during periods of rapid growth. In particular, our focus on leading the market in introducing new products and advanced manufacturing processes has meant that we must aggressively recruit research and development personnel and engineers with expertise in cutting-edge technologies.

We also depend on the services of experienced key senior management, and if we lose their services, it would be difficult to find and integrate replacement personnel in a timely manner, if at all. We also employ highly skilled line operators at our various production facilities.

The loss of the services of any of our key research and development and engineering personnel, senior management or skilled operators without adequate replacement, or the inability to attract new qualified personnel, would have a material adverse effect on our operations.

The interests of LG Electronics, our largest shareholder, and any directors or officers nominated by it, may differ from or conflict with those of us or our other shareholders.

When exercising its rights as our largest shareholder, LG Electronics may take into account not only our interests but also its interests and the interests of its affiliates. LG Electronics' interests may at times conflict with ours in a number of areas relating to our business, including potential acquisitions of businesses or properties, incurrence of indebtedness, financial commitments, sales and marketing functions, indemnity arrangements, service arrangements and the exercise by LG Electronics of significant influence over our management and affairs. See "Item 6.A. Directors and Senior Management" for a description of the composition of our current board of directors and senior management.

Labor unrest may disrupt our operations.

As of December 31, 2018, more than half of our employees based in Korea were union members, and production employees accounted for substantially all of these members. We have a collective bargaining arrangement with our labor union, which is negotiated once a year. Any deterioration in our relationship with our employees or labor unrest resulting in a work stoppage or strike may have a material adverse effect on our financial condition and results of operations.

We are subject to strict safety and environmental regulations and we may be subject to fines or restrictions that could cause our operations to be interrupted.

Our manufacturing processes involve hazardous materials and generate chemical waste, waste water and other industrial waste at various stages in the manufacturing process, and we are subject to a variety of laws and regulations relating to the use, storage, discharge and disposal of such chemical by-products and waste substances. We have enacted safety measures, engaged in employee education on handling such materials and installed various types of safety and anti-pollution equipment, consistent with industry standards, for the treatment of chemical waste and equipment for the recycling of treated waste water at our various facilities. See "Item 4.B. Business Overview—Environmental Matters" for a description of the anti-pollution equipment that we have installed in our various facilities. However, we cannot provide assurance that our protocols will always be followed and safety or environmental related claims will not be brought against us or that the local or national governments will not take steps toward adopting more stringent safety or environmental standards.

Any failure on our part to comply with any present or future safety and environmental regulations could result in the assessment of damages or imposition of fines against us, suspension of production or a cessation of operations. Since 2016, we and certain of our employees have received aggregate fines of approximately \(\pi\)35.0 million and are currently undergoing proceedings relating to fines of \(\pi\)6.0 million in connection with violations of safety and environmental regulations under the Industrial Safety and Health Act, the Waste Management Act and the Air Quality Management Act. In addition, safety and environmental regulations could require us to acquire costly equipment or to incur other significant compliance expenses that may materially and negatively affect our financial condition and results of operations.

Risks Relating to our American Depositary Shares, or ADSs, or our Common Stock

Future sales of shares of our common stock in the public market may depress our stock price and make it difficult for you to recover the full value of your investment in our common stock or our ADSs.

We cannot predict the effect, if any, that market sales of shares of our common stock or the availability of our common stock for sale will have on the market price of our common stock prevailing from time to time. Our largest shareholder, LG Electronics, currently owns 37.9% of our voting stock. There is no assurance that LG Electronics will not sell all or a part of its ownership interest in us.

Any future sales by LG Electronics or any future issuance by us of a significant number of shares of our common stock in the public market, or the perception that any of these events may occur, could cause the market price of our common stock to decrease or to be lower than it might be in the absence of these events or perceptions.

Our public shareholders may have more difficulty protecting their interests than they would as shareholders of a U.S. corporation.

Our corporate affairs are governed by our articles of incorporation and by the laws governing Korean corporations. The rights and responsibilities of our shareholders and members of our board of directors under Korean law may be different from those that apply to shareholders and directors of a U.S. corporation. For example, minority shareholder rights afforded under Korean law often require the minority shareholder to meet minimum shareholding requirements in order to exercise certain rights. In the case of public companies, a shareholder must own, individually or collectively with other shareholders, at least 0.01% of our common stock for at least six consecutive months in order to file a derivative suit on our behalf. While the facts and circumstances of each case will differ, the duty of care required of a director under Korean law may not be the same as the fiduciary duty of a director of a U.S. corporation. Therefore, holders of our common stock or our ADSs may have more difficulty protecting their interests against actions of our management, members of our board of directors or controlling shareholders than they would as shareholders of a U.S. corporation.

You may be limited in your ability to deposit or withdraw the common stock underlying the ADSs, which may adversely affect the value of your investment.

Under the terms of our deposit agreement, holders of common stock may deposit such common stock with the depositary's custodian in Korea and obtain ADSs, and holders of ADSs may surrender ADSs to the depositary and receive common stock. However, to the extent that a deposit of common stock exceeds the difference between:

- the aggregate number of shares of common stock we have consented to allow to be deposited for the issuance of ADSs (including deposits in connection with offerings of ADSs and stock dividends or other distributions relating to ADSs); and
- the number of shares of common stock on deposit with the custodian for the benefit of the depositary at the time of such proposed deposit,

such common stock will not be accepted for deposit unless (1) our consent, subject to governmental authorization, with respect to such deposit has been obtained or (2) such consent is no longer required under Korean laws and regulations.

Under the terms of the deposit agreement, no consent is required if the shares of common stock are obtained through a dividend, free distribution, rights offering or reclassification of such stock. The current limit on the number of shares that may be deposited into our ADR facility is 68,095,700 as of April 24, 2019. The number of shares issued or sold in any subsequent offering by us or our major shareholders, subject to government authorization, raises the limit on the number of shares that may be deposited into the ADR facility, except to the extent such deposit is prohibited by applicable laws or violates our articles of incorporation, or we decide with the ADR depositary to limit the number of shares of common stock so offered that would be eligible for deposit under the deposit agreement in order to maintain liquidity for the shares in Korea as may be requested by the relevant Korean authorities. We might not consent to the deposit of any additional shares of common stock. As a result, if a holder surrenders ADSs and withdraws common stock, it may not be able to deposit the common stock again to obtain ADSs.

Holders of ADSs will not have preemptive rights in some circumstances.

The Korean Commercial Code of 1962, as amended, and our articles of incorporation require us, with some exceptions, to offer shareholders the right to subscribe for new shares of our common stock in proportion to their existing shareholding ratio whenever new shares are issued, except under certain circumstances as provided in our articles of incorporation. Accordingly, if we issue new shares to non-shareholders based on such exception, a holder of our ADSs may experience dilution in its holdings. Furthermore, if we offer any right to subscribe for additional shares of our common stock or any rights of any other nature to existing shareholders subject to their preemptive rights, the depositary, after consultation with us, may make the rights available to holders of our ADSs or use reasonable efforts to dispose of the rights on behalf of such holders and make the net proceeds available to such holders. The depositary, however, is not required to make available to holders any rights to purchase any additional shares of our common stock unless it deems that doing so is lawful and feasible and

- a registration statement filed by us under the U.S. Securities Act of 1933, as amended, is in effect with respect to those shares; or
- the offering and sale of those shares is exempt from or is not subject to the registration requirements of the Securities
 Act.

We are under no obligation to file any registration statement with the SEC or to endeavor to cause such a registration statement to be declared effective. Moreover, we may not be able to establish an exemption from registration under the Securities Act. Accordingly, a holder of our ADSs may be unable to participate in our rights offerings and may experience dilution in its holdings. If a registration statement is required for a holder of our ADSs to exercise preemptive rights but is not filed by us or is not declared effective, the holder will not be able to exercise its preemptive rights for additional ADSs and it will suffer dilution of its equity interest in us. If the depositary is unable to sell rights that are not exercised or not distributed or if the sale is not lawful or feasible, it will allow the rights to lapse, in which case the holder will receive no value for these rights.

Holders of ADSs will not be able to exercise dissent and appraisal rights unless they have withdrawn the underlying shares of our common stock and become our direct shareholders.

In some limited circumstances, including the transfer of the whole or any significant part of our business and our merger or consolidation with another company, dissenting shareholders have the right to require us to purchase their shares under Korean law. However, a holder of our ADSs will not be able to exercise such dissent and appraisal rights if the depositary refuses to do so on their behalf. Our deposit agreement does not require the depositary to take any action in respect of exercising dissent and appraisal rights. In such a situation, holders of our ADSs must initiate the withdrawal of the underlying common stock from the ADS facility (and incur charges relating to that withdrawal) by the day immediately following the date of public disclosure of our board of directors' resolution of a merger or other events triggering appraisal rights and become our direct shareholder prior to the record date of the shareholders' meeting at which the relevant transaction is to be approved, in order to exercise dissent and appraisal rights.

Dividend payments and the amount you may realize upon a sale of our common stock or ADSs that you hold will be affected by fluctuations in the exchange rate between the U.S. dollar and the Korean Won.

Cash dividends, if any, in respect of the shares represented by our ADSs will be paid to the depositary in Korean Won and then converted by the depositary into U.S. dollars, subject to certain conditions. Accordingly, fluctuations in the exchange rate between the Korean Won and the U.S. dollar will affect, among other things, the amounts a holder will receive from the depositary in respect of dividends, the U.S. dollar value of the proceeds that a holder would receive upon sale in Korea of the shares of our common stock obtained upon surrender of ADSs and the secondary market price of ADSs. Such fluctuations will also affect the U.S. dollar value of dividends and sales proceeds received by holders of our common stock.

Risks Relating to Korea

If economic conditions in Korea deteriorate, our current business and future growth could be materially and adversely affected.

We are incorporated in Korea, and a substantial portion of our operations and assets are located in Korea. As a result, we are subject to political, economic, legal and regulatory risks specific to Korea. The economic indicators in Korea in recent years have shown mixed signs, and future growth of the Korean economy is subject to many factors beyond our control, including developments in the global economy.

In recent years, adverse conditions and volatility in the worldwide financial markets, fluctuations in oil and commodity prices and the general weakness of the global economy have contributed to the uncertainty of global economic prospects in general and have adversely affected, and may continue to adversely affect, the Korean economy. The value of the Won relative to major foreign currencies has also fluctuated significantly and, as a result of changing global and Korean economic conditions, there has been volatility in the stock prices of Korean companies in recent years. Future declines in the Korea Composite Stock Price Index (the "KOSPI") and large amounts of sales of Korean securities by foreign investors and subsequent repatriation of the proceeds of such sales may adversely affect the value of the Won, the foreign currency reserves held by financial institutions in Korea and the ability of Korean companies to raise capital. Any future deterioration of the Korean or global economy could adversely affect our business, financial condition and results of operations.

Developments that could have an adverse impact on Korea's economy include:

- declines in consumer confidence and a slowdown in consumer spending;
- deterioration in economic or diplomatic relations between Korea and its trading partners or allies, including deterioration resulting from territorial or trade disputes or disagreements in foreign policy (such as the controversy between Korea and China regarding the deployment of a Terminal High Altitude Area Defense system in Korea by the United States in March 2017 and the ensuing economic and other retaliatory measures by China against Korea during the remainder of 2017);
- adverse conditions in the economies of countries and regions that are important export markets for Korea, such as China, the United States, Europe and Japan, or in emerging market economies in Asia or elsewhere, as well as increased uncertainties related to Brexit;
- adverse changes or volatility in foreign currency reserve levels, commodity prices (including oil prices), exchange rates (including fluctuation of the U.S. dollar, Euro or Japanese Yen exchange rates or revaluation of the Chinese Renminbi), interest rates, inflation rates or stock markets;
- increased sovereign default risk in select countries and the resulting adverse effects on the global financial markets;
- a deterioration in the financial condition or performance of small- and medium-sized enterprises and other companies in Korea due to the Korean government's policies to increase minimum wages and limit working hours of employees;
- investigations of large Korean business groups and their senior management for possible misconduct;
- a continuing rise in the level of household debt and increasing delinquencies and credit defaults by retail and smalland medium-sized enterprise borrowers in Korea;

- social and labor unrest;
- decreases in the market prices of Korean real estate;
- the economic impact of any pending or future free trade agreements or of any changes to existing free trade agreements;
- a decrease in tax revenue or a substantial increase in the Korean government's expenditures for fiscal stimulus measures, unemployment compensation and other economic and social programs that would lead to an increased government budget deficit;
- financial problems or lack of progress in the restructuring of Korean business groups, other large troubled companies, their suppliers or the financial sector;
- loss of investor confidence arising from corporate accounting irregularities or corporate governance issues concerning certain Korean companies;
- increases in social expenditures to support an aging population in Korea or decreases in economic productivity due to the declining population size in Korea;
- geo-political uncertainty and risk of further attacks by terrorist groups around the world;
- the occurrence of severe health epidemics in Korea or other parts of the world, such as the Middle East Respiratory Syndrome outbreak in Korea in 2015;
- natural or man-made disasters that have a significant adverse economic or other impact on Korea or its major trading partners;
- political uncertainty or increasing strife among or within political parties in Korea;
- hostilities or political or social tensions involving oil producing countries in the Middle East and North Africa and any material disruption in the global supply of oil or sudden increase in the price of oil;
- increased reliance on exports to service foreign currency debts, which could cause friction with Korea's trading partners;
- the continued growth of the Chinese economy, to the extent its benefits (such as increased exports to China) are outweighed by its costs (such as competition in export markets or for foreign investment and the relocation of manufacturing bases from Korea to China);
- political or social tensions involving Russia and any resulting adverse effects on the global supply of oil or the global financial markets; and
- an increase in the level of tensions or an outbreak of hostilities between North Korea and Korea or the United States.

Escalations in tensions with North Korea could have an adverse effect on us and the market value of our common stock and ADSs.

Relations between Korea and North Korea have been tense throughout Korea's modern history. The level of tension between the two Koreas has fluctuated and may increase abruptly as a result of current and future events. In particular, there have been heightened security concerns in recent years stemming from North Korea's nuclear weapon and ballistic missile programs as well as its hostile military actions against Korea. Some of the significant incidents in recent years include the following:

North Korea renounced its obligations under the Nuclear Non-Proliferation Treaty in January 2003 and conducted six rounds of nuclear tests since October 2006, including claimed detonations of hydrogen bombs, which are more powerful than plutonium bombs, and warheads that can be mounted on ballistic missiles. Over the years, North Korea has also conducted a series of ballistic missile tests, including missiles launched from submarines and intercontinental ballistic missiles that it claims can reach the United States mainland. In response, the Korean government has repeatedly condemned the provocations and flagrant violations of relevant United Nations Security Council resolutions. In February 2016, the Korean government also closed the inter-Korea Gaesong Industrial Complex in response to North Korea's fourth nuclear test in January 2016. Internationally, the United Nations Security Council has passed a series of resolutions condemning North Korea's actions and significantly expanding the scope of sanctions applicable to North Korea, most recently in December 2017 in response to North Korea's intercontinental ballistic missile test in November 2017. Over the years, the United States and the European Union have also expanded their sanctions applicable to North Korea.

• In March 2010, a Korean naval vessel was destroyed by an underwater explosion, killing many of the crewmen on board. The Korean government formally accused North Korea of causing the sinking, while North Korea denied responsibility. Moreover, in November 2010, North Korea fired more than one hundred artillery shells that hit Korea's Yeonpyeong Island near the Northern Limit Line, which acts as the de facto maritime boundary between Korea and North Korea on the west coast of the Korean peninsula, causing casualties and significant property damage. The Korean government condemned North Korea for the attack and vowed stern retaliation should there be further provocation.

North Korea's economy also faces severe challenges, which may further aggravate social and political pressures within North Korea.

Although bilateral summit meetings were held between the two Koreas in April, May and September 2018 and between the United States and North Korea in June 2018 and February 2019, there can be no assurance that the level of tensions affecting the Korean peninsula will not escalate in the future. Any increase in tensions, which may occur, for example, if North Korea experiences a leadership crisis, high-level contacts between Korea or the United States and North Korea break down or further military hostilities occur, could have a material adverse effect on the Korean economy and on our business, financial condition and results of operations and the market value of our common stock and ADSs.

If the Korean government deems that emergency circumstances are likely to occur, it may restrict holders of our ADSs and the depositary from converting and remitting dividends and other amounts in U.S. dollars.

Under the Korean Foreign Exchange Transaction Law, if the Korean government deems that certain emergency circumstances, including sudden fluctuations in interest rates or exchange rates, extreme difficulty in stabilizing the balance of payments or substantial disturbance in the Korean financial and capital markets, are likely to occur, it may impose any necessary restrictions as requiring Korean or foreign investors to obtain prior approval from the Minister of Strategy and Finance for the acquisition of Korean securities or the repatriation of interest, dividends or sales proceeds arising from disposition of such securities or other transactions involving foreign exchange. See "Item 10.D. Exchange Controls."

Item 4. INFORMATION ON THE COMPANY

Item 4.A. History and Development of the Company

We are a leading innovator of TFT-LCD, OLED and other display panel technologies. We manufacture display panels in a broad range of sizes and specifications primarily for use in televisions, notebook computers, desktop monitors, tablet computers and various other applications, including mobile devices.

The origin of our display business, which first started with TFT-LCD panels, can be traced to the TFT-LCD research that began in 1987 at the Goldstar R&D Center, which was then part of LG Electronics Inc. TFT-LCD research continued at the Anyang R&D Center, a research and development center established by LG Electronics in 1990 in Anyang, Korea, which was subsequently moved to our Paju Display Cluster in 2008, and which today continues to lead our technology innovation efforts. In 1993, the TFT-LCD business division was launched within LG Electronics, and in September 1995 mass production of TFT-LCD panels began at P1, its first fabrication facility, producing mainly TFT-LCD panels for notebook computers and other applications. In December 1997, LG Semicon Inc., a subsidiary of LG Electronics, began mass production at P2, producing mainly TFT-LCD panels for notebook computers.

We were incorporated in 1985 under the laws of the Republic of Korea under the original name of Goldstar Software Co., Ltd., a subsidiary of LG Electronics whose main business was the development and marketing of software, which changed its name to LG Software, Ltd. in January 1995 and subsequently to LG Soft, Ltd. in January 1997. At the end of 1998, LG Electronics and LG Semicon transferred their respective TFT-LCD-related businesses to LG Soft, which, as part of the business transfer, changed its name to LG LCD Co., Ltd.

In July 1999, LG Electronics entered into a joint venture agreement with Koninklijke Philips Electronics N.V., pursuant to which Philips Electronics acquired a 50% interest in LG LCD. In connection with this transaction, LG LCD transferred its existing software-related business to LG Electronics in order to focus solely on the TFT-LCD business. The joint venture, which was renamed LG.Philips LCD Co., Ltd., was officially launched in August 1999. In July 2004, we completed our initial public offering and listed shares of our common stock on the Korea Exchange under the identifying code "034220" and our ADSs on the New York Stock Exchange under the symbol "LPL". Prior to the listings, LG Electronics and Philips Electronics terminated the joint venture agreement and entered into a shareholders' agreement to reflect new arrangements between them as controlling shareholders. The shareholders' agreement automatically terminated upon Philips Electronics' sale of all of its remaining ownership interest in us in March 2009. Effective March 3, 2008, we changed our name from LG.Philips LCD Co., Ltd. to LG Display Co., Ltd. in order to reflect the expansion of our business scope and shift in business model, fully expressing our commitment to the future.

We launched our OLED Business Unit in June 2008 in anticipation of future growth of the OLED business. The origin of our OLED business began with our acquisition of LG Electronics' active matrix OLED, or AMOLED, business in January 2008 by way of taking over its inventory, intellectual property rights and employees related to the AMOLED business. In 2012, partly in recognition of the growing importance of OLED to the future of our business, especially in connection with large-sized products, we restructured our internal organization relating to our OLED business, breaking up the OLED Business Unit and transferring our mobile-related business (including OLED products for mobile and other applications) to the newly created IT/Mobile Business Division and transferring our OLED television panel business to the Television Business Division. We were the first in the world to commence mass production of 55-inch OLED television panels in 2013. In December 2014, we established a separate OLED Business Division to strengthen our OLED business and solidify our competitive advantages. In December 2015, in order to achieve synergies and further strengthen our OLED business, we acquired LG Chem's OLED light business by way of assuming the inventory, intellectual property rights and employees related to the OLED light business. In December 2016, partly in an effort to expand our OLED business across our display panel applications (including mobile products and other applications), we restructured our internal organization by product type, and integrated the capabilities of our OLED business into the Television Business Division, the IT Business Division and the Mobile Business Division. Our principal executive offices are located at LG Twin Towers, 128 Yeoui-daero, Yeongdeungpo-gu, Seoul 07336 and our telephone number is +82-2-3777-1010. Our website address is http://www.lgdisplay.com.

We have continued to develop our manufacturing process technologies and expand our production facilities. Each successive generation of our fabrication facilities has been designed to process increasingly larger-size glass substrates, which allows us to cut a larger number of panels, sometimes with larger sizes, from each glass substrate. The ability to process larger glass substrates allows us to produce a larger variety of display sizes to accommodate evolving business and consumer demands. For example, in order to respond to business and consumer demands for large-sized panels for televisions, in September 2014, we commenced mass production at our GP fabrication facility in Guangzhou, China, which is optimized to large-sized full high definition, or Full HD, and Ultra HD TFT-LCD panels for televisions. In addition, due to the large number of fabrication facilities we operate, we have the flexibility to make strategic decisions based on market demand to convert existing production lines housed within a fabrication facility to manufacture display panels based on newer technologies. For example, we established our AP3 production lines by converting a set of existing production lines in our P61 fabrication facility, which originally produced a-Si based display panels, to produce LTPS based display panels for mobile devices and commenced mass production in February 2014.

We work closely with the local authorities where our fabrication facilities are located, and we have signed a number of memoranda of understandings, the latest one having been signed in April 2016, with Gumi City and North Gyeongsang Province for their administrative assistance in connection with our investment at our Gumi Display Cluster in our E5 plastic OLED panel fabrication production line as well as our new fifth-generation OLED light panel fabrication facility. We began production of plastic OLED panels for mobile and other applications on our E5 production line in August 2017.

As part of our ongoing expansion plans, we are in the process of constructing several manufacturing facilities for OLED panels, including our E6 production lines for plastic OLED panels, and we have commenced mass production of plastic OLED panels on our E5 production line beginning in August 2017. In response to and in anticipation of growing demand in the China market, in July 2017, we announced our plan to establish a joint venture with the government of Guangzhou to construct a next generation large-sized OLED production line, which was established under the name of LG Display High-Tech (China) Co., Ltd., in July 2018. We currently hold a 69% ownership interest in the joint venture and the government of Guangzhou holds the remaining 31% ownership interest. We plan to invest approximately \wspace{W}5.0 trillion in the joint venture, which is expected to commence production during 2019. Each of our on-going expansion projects are subject to market conditions and any changes in our investment timetable. See "Item 4.D. Property, Plants and Equipment—Capital Expenditures."

With respect to our assembly facilities, from 1995 to early 2003, we have assembled all panels in our Gumi assembly facility adjacent to our P1 facility. Since 2003, in order to better serve the needs of our global customers, we commenced operations at various assembly facilities in Korea, Poland, China and, most recently, Vietnam. For more information on our module assembly facilities, see "Item 4.D. Property, Plants and Equipment—Current Facilities."

For a description of cash outflows relating to our capital expenditures in the past three fiscal years, see "Item 5.A. Operating Results—Overview—Manufacturing Productivity and Costs."

The U.S. Securities and Exchange Commission, or the SEC, maintains a website (*http://www.sec.gov*), which contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

Item 4.B. Business Overview

Overview

We manufacture TFT-LCD and OLED technology-based display panels in a broad range of sizes and specifications primarily for use in televisions, notebook computers, desktop monitors, tablet computers and mobile devices, including smartphones, and we are one of the world's leading suppliers of Ultra HD television panels. We also manufacture display panels for industrial and other applications, including entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment. In 2018, we sold a total of 148.3 million display panels that are nine inches or larger. According to IHS Technology, we had a global market share for display panels of nine inches or larger of approximately 28.5% based on sales revenue in 2018.

We currently operate fabrication facilities, which include separately designated sets of fabrication production lines housed in certain facilities, located in our Display Clusters in Gumi and Paju, Korea and in Guangzhou, China. We also operate module assembly facilities in Korea and abroad. For a full description of our current facilities, see "Item 4.D. Property, Plants and Equipment—Current Facilities."

We seek to build our market position based on collaborative relationships with our customers and suppliers, a focus on high-end differentiated specialty display products and manufacturing productivity. Our end-brand customers include many of the world's leading manufacturers of televisions, notebook computers, desktop monitors, tablet computers and mobile phones such as LG Electronics. For a description of our sales to LG Electronics, our largest shareholder, see "Item 7.B. Related Party Transactions."

At the direction of our end-brand customers, we typically ship our display panels to their original equipment manufacturers, known as "system integrators," who use our display panels in products they assemble on a contract basis for our end-brand customers. We engage in direct sales (including through our overseas subsidiaries), as well as indirect sales through our affiliated trading company, LG International and its subsidiaries, to end-brand customers and their system integrators. For a description of our sales arrangements with LG International, see "Item 7.B. Related Party Transactions."

Our sales were \(\pi\)26,504 billion in 2016, \(\pi\)27,790 billion in 2017 and \(\pi\)24,337 billion (US\$21,868 million) in 2018.

Technology Description

TFT-LCD Technology

A TFT-LCD panel consists of two thin glass substrates and polarizer films between which a layer of liquid crystals is deposited and behind which a light source called a backlight unit is mounted. The frontplane glass substrate is fitted with a color filter, while the backplane glass substrate, also called a TFT array, has many thin film transistors, or TFT, formed on its surface. The liquid crystals are normally aligned to allow the polarized light from the backlight unit to pass through the two glass panels. When voltage is applied to the transistors on the TFT array, the liquid crystals change their alignment and alter the amount of light that passes through them. Meanwhile, the color filter on the frontplane glass substrate gives each pixel its own color. The combination of these pixels in different colors and levels of brightness forms the image on the panel.

The process for manufacturing a TFT-LCD panel consists of four steps:

- TFT array process involves fabricating a large number of thin film transistors on the backplane glass substrate. The number of transistors corresponds to the number of pixels on the screen. The process is similar to the process for manufacturing semiconductor chips, except that transistors are fabricated on large glass substrates instead of silicon wafers. Unlike in the semiconductor industry, however, the number of transistors per glass substrate is not a primary driver of the manufacturing costs for TFT-LCDs. Once the TFT array process on glass substrates is completed, the substrates are cut into panel-sized pieces;
- *Color filter process* involves fabricating a large number of color regions on the frontplane glass substrate that will overlay the TFT array prior to the cell process. The colored dots of red, green and blue combine to form various colors. The process is similar to the TFT array process but involves depositing colored dves instead of transistors;
- *Cell process* involves joining together the backplane glass substrate that is arrayed with transistors and the frontplane glass substrate that is patterned with a color filter. The space between the two glass substrates is filled with liquid crystal materials. The resulting panel is called a cell; and
- *Module assembly process* involves connecting additional components, such as driver integrated circuits and backlight units, to the cell.

The TFT array, color filter and cell processes are capital-intensive and require highly automated production equipment and are the primary determinants of fixed manufacturing cost. In contrast, the module assembly process involves semi-automated production equipment and manual labor to assemble the various components. Materials are the primary drivers of variable manufacturing cost.

IPS Technology

In-Plane Switching, or IPS, is a liquid crystal switching technology that was developed to address commonly faced problems with TFT-LCD panels that utilized other liquid crystal technologies, namely narrow viewing angles, inconsistent picture uniformity and slow response times. Unlike other liquid crystal technologies where the liquid crystals are aligned vertically or at an angle in relation to the glass substrate, with IPS technology, the liquid crystals are aligned horizontally in parallel to the glass substrate, which allows for wider viewing angles, greater picture uniformity and faster response times. Our TFT-LCD display panels, including our TFT-LCD television panels, utilize IPS technology.

Advanced High Performance IPS, or AH-IPS, is an IPS technology that integrates ultra-fine pitch technology and high transmittance technology, which allows for ultra-high resolution imagery, increased luminance and greater energy efficiency. AH-IPS is currently utilized in our smartphone panels and other mobile display products, as well as certain of our panels for notebook computers, tablet computers and desktop monitors. For example, in April 2014, we produced a 5.5-inch quad high definition ("Quad HD") smartphone panel, which has four times the resolution (538 pixels-per-inch) of a conventional HD panel. In February 2017, we also introduced a 5.7-inch Quad HD smartphone panel with an upgraded resolution of 564 pixels-per-inch. In 2018, we developed a 5.8-inch Ultra HD smartphone panel featuring high luminance, low power consumption and high dynamic range ("HDR") support, as well as the world's first 34-inch 1900R-curved and four-sided borderless Wide Quad HD monitor.

OLED Technology

An OLED panel consists of a thin film of organic material encased between anode and cathode electrodes. When a current is applied, light is emitted directly from the organic material. Because a separate backlight is not needed, OLED panels can be lighter and thinner compared to TFT-LCD panels, which require a separate backlight. In addition, images projected on OLED panels have higher contrast ratios and more realistic color reproduction compared to images projected on TFT-LCD panels.

We utilize different types of sub-pixel and backplane technologies in our OLED panels. Under the RGB sub-pixel structure, a combination of red, green and blue sub-pixels without color filters or white sub-pixels are used to produce a range of colors. While we, along with most of our competitors, utilize RGB sub-pixel technology for small- and medium-sized products, there are various technical challenges in scaling RGB sub-pixel technology for large-sized products, such as television panels. For our OLED television panels, we have overcome these challenges by opting to utilize our WRGB sub-pixel structure, whereby red, green and blue color filters are placed over white OLED sub-pixels to produce a range of colors and began production of OLED television panels on our E3 production lines in 2013 and mass production of OLED television panels on our E4 production lines in 2014. Mass production of our plastic OLED panels for mobile and other applications began on our E5 production line in August 2017. As for backplane technology, our large-sized OLED products are produced using oxide TFT backplane technology as compared to our smaller-sized OLED products which utilize LTPS backplane technology, as described in greater detail below.

Backplane Technology

Oxide TFT

We use oxide TFT technology to produce backplanes for use in our large-sized OLED panels, such as the panels used in OLED television products. The traditional amorphous silicon-based TFT, or a-Si TFT, backplane technology has certain limitations that render it unsuitable for producing backplanes for use in large-sized OLED panels with high resolutions and fast refresh rates. For example, in larger and higher-resolution display panels, a-Si TFT backplanes consume increased rates of power and experience a decrease in the rate at which each transistor is able to switch between images, or the rate of mobility.

As an alternative to a-Si TFT backplane technology, we have successfully adopted a metal oxide-based TFT, or simply oxide TFT, backplane technology. In place of the amorphous silicon-based semiconductors used in a-Si TFT backplanes, oxide TFT backplanes utilize metal oxide-based semiconductors, which consume less energy, have a higher rate of mobility and allow for construction of display panels with narrower bezels as compared to display panels with traditional a-Si TFT backplanes.

We were the first company in the display industry to successfully adopt oxide TFT technology in large-sized OLED products, which has been a key factor in reducing the costs of manufacturing large-sized OLED panels in large quantities. Because the manufacturing process of oxide TFT-based OLED panels is similar to the process used to manufacture TFT-LCD panels, we are able to use our existing TFT-based production lines with relatively little modification to mass produce large-sized OLED panels.

LTPS

LTPS backplanes have superior current-driving capacity and produce brighter images, while consuming less energy compared to a-Si TFT or oxide TFT backplanes, due to their higher mobility rates. However, due to a complex manufacturing process, LTPS backplanes have relatively higher production costs compared to a-Si TFT or oxide TFT backplanes, making it uneconomical to use in the production of large-sized panels. As a result, we generally utilize LTPS backplanes in the production of smaller-sized panels, particularly in TFT-LCD and OLED smartphone panels.

Products

We manufacture display panels of various specifications that are integrated by our customers into principally the following products:

- Televisions, which utilize large-sized display panels ranging from 21.5 inches to 105 inches in size, including "8K"
 Ultra HD television panels, which have four times the number of pixels compared to conventional HD television panels;
- Notebook computers, which utilize display panels ranging from 11.6 inches to 17.3 inches in size;
- Desktop monitors, which utilize large-sized display panels ranging from 15.6 inches to 49 inches in size;
- Tablet computers, which utilize display panels ranging from 7 inches to 12.9 inches in size; and
- Mobile and other applications, which utilize a wide array of display panel sizes, including smartphones and other types of mobile phones and industrial and other applications, including entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment.

Unless otherwise specified, when we refer to panels in this annual report, we mean assembled cells with added components, such as driver integrated circuits and backlight units.

We design and manufacture our panels to meet the various size and performance specifications of our customers, including specifications relating to thinness, weight, resolution, color quality, power consumption, response times and viewing angles. The specifications vary from product to product. For television panels, a premium is placed on faster response times, wider viewing angles, higher resolution and greater color fidelity. Notebook computer panels require an emphasis on thinness, light weight and power efficiency, while desktop monitor panels demand a greater focus on brightness, color brilliance and wide viewing angles. For mobile panels, particularly smartphones, an emphasis is placed on brightness and power efficiency.

In addition to manufacturing and selling display panels, we also manufacture and sell desktop monitors through our joint venture companies. See "—Joint Ventures."

Televisions

Our television display panels range from 21.5 inches to 105 inches in size. We began mass production of television display panels in 2001. Our sales of display panels for televisions were \(\pi\)10,133 billion, or 38.2% of our total revenue, in 2016, \(\pi\)11,718 billion, or 42.2% of our total revenue, in 2017 and \(\pi\)9,727 billion (US\$8,741 million), or 40.0% of our total revenue, in 2018 and constituted our largest product category in each of the past three years. In 2018, our principal products in this category in terms of sales revenue consisted of 55-inch and 65-inch display panels.

Brand manufacturers of televisions and their distribution channels prefer long-term arrangements with a limited number of display panel suppliers that can offer a full product line, and we believe that we are well positioned to meet their requirements with our strengths in technology, manufacturing scale and efficiency as well as the breadth of our product portfolio.

Notebook Computers

Our display panels for notebook computers range from 11.6 inches to 17.3 inches in size in a variety of display formats. Revenue from sales of our display panels for notebook computers was \(\pi_2,384\) billion, or 9.0% of our total revenue, in 2016, \(\pi_2,244\) billion, or 8.1% of our total revenue, in 2017 and \(\pi_2,837\) billion (US\$2,549\) million), or 11.7% of our total revenue, in 2018. In 2018, our principal products in terms of sales revenue in this category were 13.3-inch and 15.4-inch display panels.

Consumer demand for notebook computers has steadily declined in recent years due in part from competition from tablet computers and smartphones that are more economical and convenient to use compared to notebook computers while offering similar levels of computing functionality. However, there has been an increase in demand for high resolution notebook displays, which has helped the competitiveness of our AH-IPS technology-based display panels.

Desktop Monitors

In 2018, our principal products in terms of sales revenue in this category were 23.8-inch and 27-inch display panels.

Tablet Computers

Our tablet computer display panels range from 7 inches to 12.9 inches in size in a variety of display formats. Revenue from sales of our display panels for tablet computers was \$2,696 billion, or 10.2% of our total revenue, in 2016, \$2,370 billion, or 8.5% of our total revenue, in 2017, and \$1,991 billion (US\$1,789 million), or 8.2% of our total revenue, in 2018.

After experiencing steady growth in consumer demand for tablet computers since they were first introduced, consumer demand has generally plateaued in recent years. In 2018, our principal products in terms of sales revenue in this category were 9.7-inch and 12.9-inch display panels.

Mobile and Other Applications

Our product portfolio also includes panels for mobile and other applications, which utilize a wide array of display panel sizes, including smartphones and other types of mobile phones and industrial and other applications, including entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment. Display panels that are nine inches and smaller are referred to as small- and medium-sized panels.

While this was our fastest growing category of products in terms of revenue growth in recent years, driven largely by an increase in demand for increasingly larger-sized smartphone panels, the market for smartphones recorded a negative growth for the first time in 2018, according to data published by Counterpoint. Revenue from sales of our display panels for mobile and other applications was \psi_7,216 billion, or 27.2% of our total revenue, in 2016, \psi_7,020 billion, or 25.3% of our total revenue, in 2017 and \psi_5,699 billion (US\$5,121 million), or 23.4% of our total revenue, in 2018. In 2018, sales of panels for smartphones continued to constitute a significant majority in terms of both sales revenue and sales volume in the mobile and other applications category.

Some of the panels we produce for industrial products, such as medical diagnostic equipment, are highly specialized niche products manufactured to the specifications of our clients, while others, such as industrial controllers, may be manufactured by slightly modifying a standard product design for our other products, such as desktop monitors. Display panels for these other applications broaden our sales base and product mix. They are also often a good channel through which we can commercialize a particular technology that we have developed. We generally determine the production level and specification of our display panels for mobile and other applications by assessing various business opportunities as they arise.

Sales and Marketing

Customer Profile

Our display panels are included primarily in televisions, notebook computers, desktop monitors, tablet computers and mobile and other applications sold by our global end-brand customers, including LG Electronics. LG Electronics is our largest shareholder, and the terms of our sales to LG Electronics are negotiated based on then-prevailing market prices as adjusted for LG Electronics' requirements, including volume and specifications. See "Item 7.B. Related Party Transactions" for further description of our sales to LG Electronics.

We negotiate directly with our end-brand customers concerning the terms and conditions of the sales, but typically ship our display panels to designated system integrators at the direction of these end-brand customers. Sales data to end-brand customers include direct sales to these end-brand customers as well as sales to their designated system integrators, including through our affiliated trading company, LG International, and its subsidiaries, as further discussed below under "—Sales."

A substantial portion of our sales is attributable to a limited number of our end-brand customers. Our top ten end-brand customers together accounted for a significant majority of our sales in each of 2016, 2017 and 2018. Of our top ten end-brand customers, two of them accounted for more than 10% of our sales on an individual basis for each of the past three years. For example, sales to LG Electronics, including as a system integrator, amounted to approximately 22%, 23% and 21% of our sales in 2016, 2017 and 2018 respectively.

In addition to our top ten end-brand customers, we sell a portion of our display panels to a variety of other manufacturers of computers and electronic products.

The following table sets forth for the years indicated the geographic breakdown of our sales based on the location of our customers. The figures below reflect orders from our end-brand customers, their system integrators and our affiliated trading company, LG International, and its subsidiaries:

		Year ended December 31,						
	201	2016		2017		2018		
	Sales	%	Sales	%	Sales	Sales (3)	%	
	(in	(in billions of Won and millions of US\$, except for percentages)						
Korea	₩ 1,825	6.9%	₩ 1,996	7.2%	₩ 1,589	US\$ 1,428	6.5%	
China	18,368	69.3	18,091	65.1	15,243	13,697	62.6	
Asia (excluding China) (1)	2,149	8.1	2,383	8.6	2,481	2,229	10.2	
United States (2)	2,053	7.7	2,725	9.8	2,463	2,213	10.1	
Europe (excluding Poland)	984	3.7	1,433	5.2	1,496	1,344	6.1	
Poland	1,125	4.2	1,162	4.2	1,064	956	4.4	
Total (3)	₩26,504	100.0%	W 27,790	100.0%	W24,337	US\$21,868	100.0%	

- (1) Includes Oceania, Africa and the Middle East.
- (2) Includes other countries in North and South America.
- (3) For convenience, the Korean Won amounts are expressed in U.S. dollars at the rate of \(\foat\)1,112.85 to US\\$1.00, the noon buying rate in effect on December 31, 2018 as certified by the Federal Reserve Bank of New York for customs purposes. This translation should not be construed as a representation that the Korean Won amounts represent, have been or could be converted to U.S. dollars at that rate or any other rate.

Sales

Our sales and marketing departments seek to maintain and strengthen relationships with our current customers in existing markets as well as expand our business in new markets and with new customers. We currently have wholly-owned sales subsidiaries in the United States, Japan, Germany, Taiwan, China and Singapore.

The focus of our sales activities is on strengthening our relationships with large end-brand customers, with whom we maintain strong collaborative relationships. Customers look to us for a reliable supply of a wide range of display products. We believe our reliability and scale as a supplier helps support our customers' product positions. We view our relationships with our end-brand customers as important to their product development strategies, and we collaborate with our end-brand customers in the design and development stages of their new products. In addition, our sales teams coordinate closely with our end-brand customers' designated system integrators to ensure timely delivery. For each key customer, we appoint an account manager who is primarily responsible for our relationship with that specific customer, complemented by a product development team consisting of engineers who participate in meetings with that customer to understand the customer's specific needs.

We do not typically enter into binding long-term contracts with our customers. However, we have in place long-term supply and purchase agreements with certain major end-brand customers, whereby we and our end-brand customers agree on general volume parameters and, in some cases, product specifications and delivery terms. These agreements serve as an indication of the size and key components of a customer's order, and neither party is committed to supply or purchase any products until a firm purchase order is issued.

We engage in direct sales (including through our overseas subsidiaries), as well as indirect sales through our affiliated trading company, LG International and its subsidiaries, to end-brand customers and their system integrators. Our sales subsidiaries procure purchase orders from, and distribute our products to, system integrators and end-brand customers located in their region. In regions where we do not have a sales subsidiary, or where doing so is consistent with local market practices, we sell our products to LG International and its subsidiaries. These subsidiaries of LG International process orders from and distribute products to customers located in their region. Sales to LG International and its subsidiaries amounted to 2.9% in 2018. See "Item 7.B. Related Party Transactions" for further discussion of these sales arrangements.

Our end-brand customers or their system integrators generally place purchase orders with us a few weeks prior to delivery based on our non-binding supply and purchase agreements with them. Generally, the head office of an end-brand customer provides us with advance rolling forecasts, which, together with our own forecasts, enable us to plan our production schedule in advance. Our customers usually issue monthly purchase orders containing prices we have negotiated with the end-brand customer a few weeks prior to delivery, at which point the customer becomes committed to the order at the volumes and prices indicated in the purchase orders. Under certain special circumstances, however, a negotiated price may be subject to change during the committed period prior to delivery.

Prices for our products are generally determined based on negotiations with our end-brand customers. Pricing of our display panel products is generally market-driven, based on the complexity of the product specifications and the labor and technology involved in the design or production processes.

We generally provide a limited warranty to our end-brand customers, including the provision of replacement parts and warranty services for our products. Costs incurred under our warranty liabilities consist primarily of repairs. We set aside a warranty reserve based on our historical experience and future expectations as to the rate and cost of claims under our warranties.

Where system integrators located in certain regions are invoiced directly, we have established certain measures, such as factoring arrangements and accounts receivable insurance programs, to protect us from excessive exposure to credit risks.

Competition

The display panel industry is highly competitive. Due to the capital intensive nature of the display panel industry and the high production volumes required to achieve economies of scale, the international market for display devices is characterized by significant barriers to entry, but the competition among the relatively small number of major producers is intense. In the case of TFT-LCD panel manufacturers, currently almost all of them are located in Asia, and we compete principally with manufacturers from Korea, Taiwan, China and Japan.

The principal elements of competition for customers in the display panel market include:

- product portfolio range and availability;
- product specifications and performance;
- price:
- capacity allocation and reliability;
- customer service, including product design support; and
- logistics support and proximity of regional stocking facilities.

Our principal competitors are:

- Samsung Display in Korea;
- Innolux and AU Optronics in Taiwan;
- JDI and Sharp in Japan; and
- BOE, China Star Optoelectronics, CEC Panda and HKC in China.

According to IHS Technology, in 2018, Korean display panel manufacturers had a market share of 40.2% of the 9-inch or larger panel market based on revenue, Taiwanese manufacturers had 26.4%, Chinese manufacturers had 27.1% and Japanese manufacturers had 6.3%. Our market share of the 9-inch or larger panel market based on revenue was approximately 28.5%.

Components, Raw Materials and Suppliers

Components and raw materials accounted for approximately 66%, 65% and 63% of our sales in 2016, 2017 and 2018 respectively. The key components and raw materials of our display products include glass substrates, driver integrated circuits and polarizers used in both our TFT-LCD and OLED products, backlight units and liquid crystal materials used in our TFT-LCD products, and hole transport materials and emission materials used in our OLED products. We source these components and raw materials from outside sources, although, unlike many other display panel manufacturers, we produce a substantial portion of the color filters we use. With respect to glass substrates, Paju Electric Glass Co., Ltd., a joint venture company of which we and Nippon Electric Glass Co., Ltd. own 40% and 60%, respectively, provides us with a stable supply at competitive prices.

We generally negotiate non-binding master supply agreements with our suppliers several times a year, but pricing terms are negotiated on a quarterly basis, or if necessary, on a monthly basis. Firm purchase orders are issued generally six weeks prior to the scheduled delivery, except in the case of purchase orders for driver integrated circuits, which are issued generally six to ten weeks prior to the scheduled delivery. We purchase our components and raw materials based on forecasts from our end-brand customers as well as our own assessments of our end-brand customers' needs.

In order to reduce our component and raw material costs and our dependence on any one supplier, we generally develop compatible components and raw materials and purchase our components and raw materials from more than one source. However, we source certain key components and raw materials from a limited group of suppliers in order to ensure timely supply and consistent quality. Also, in order to facilitate implementation of our cost reduction strategies, we continually review for potential cost savings in sourcing our components and raw materials from suppliers based in Korea and those based abroad, including competitiveness of the prices offered by such suppliers and any potential for reduction in logistics and transportation costs. We perform periodic evaluations of our component and raw material suppliers based on a number of factors, including the quality and price of the components, delivery and response time, the quality of the services and the financial health of the suppliers. We reassess our supplier pool accordingly.

We maintain a strategic relationship with many of our material suppliers, and from time to time, we make equity investments in our material suppliers as part of our efforts to secure a stable supply of key components and raw materials.

In addition to components and raw materials, the manufacturing of our products requires significant quantities of electricity and water. In order to obtain and maintain reliable electric power and water supplies, we have our own back-up power generation facilities and water storage tanks as well as easy access to nearby water sources.

Equipment, Suppliers and Third Party Processors

We depend on a limited number of equipment manufacturers for equipment tailored to specific requirements. Since our manufacturing processes depend on the quality and technological capacity of our equipment, we work closely with the equipment manufacturers in the design process to ensure that the equipment meets our specifications. The principal types of equipment we use to manufacture display panels include deposition equipment, steppers, developers and coaters.

We purchase equipment from a small number of qualified vendors to ensure consistent quality, timely delivery and performance. We maintain strategic relationships with many equipment manufacturers as part of our efforts to ensure quality while reducing costs.

Historically, we have relied on a small number of overseas vendors for equipment purchases, but in recent years, we have diversified and localized our equipment purchases by shifting some of our purchases to Korean vendors. As a result of such efforts, most of our equipment for our facilities in Korea in 2018 was purchased from Korean vendors on an invoiced basis.

Our engineers begin discussions with equipment manufacturers far in advance of the planned installation of equipment in a new fabrication facility, and we typically execute a letter of intent with the vendors in advance of our planned installation to ensure timely delivery of main equipment with long-term delivery schedules. Engineers from our vendors typically accompany the new equipment to our fabrication facilities to assist in the installation process to ensure proper operation. In addition, we outsource certain manufacturing processes to third party processers from time to time to supplement our processing capacity, and in certain cases, we maintain strategic relationships with such third party processors.

Quality Control

We believe that our advanced production capabilities and our reputation for high quality and reliable products have been important factors in attracting and retaining key customers. We have implemented quality inspection and testing procedures at all of our fabrication facilities and assembly facilities. Our quality control procedures are carried out at three stages of the manufacturing process:

- incoming quality control with respect to components and raw materials;
- in-process quality control, which is conducted at a series of control points in the manufacturing process; and
- outgoing quality control, which focuses on packaging, delivery and post-delivery services to customers.

With respect to incoming quality control, we perform quality control procedures for the raw materials and components that we purchase. These procedures include testing samples of large batches, obtaining vendor testing reports and testing to ensure compatibility with other components and raw materials, as well as vendor qualification and vendor rating. Our in-process quality control includes various programs designed to detect, as well as prevent, quality deviations, reduce manufacturing costs, ensure on-time delivery, increase in-process yields and improve field reliability of our products. We perform outgoing quality control based on burn-in testing and final visual inspection of our products and accelerated life testing of samples. We inspect and test our completed display panels to ensure that they meet our high production standards. We also provide post-delivery services to our customers, and maintain warranty exchange inventories in regional hubs to meet our customers' needs.

Our quality assurance team works to ensure effective and consistent application of our quality control procedures, which include six-sigma quality control procedures, and to introduce new methodologies that could further enhance our quality control procedures. Our quality assurance programs have received accredited ISO/IATF 16949 certifications. The ISO/IATF certification process involves subjecting our manufacturing processes and quality management systems to reviews and observation for various fixed periods. ISO/IATF certification is required by certain European countries and the United States in connection with sales of industrial products in those countries, and provides independent verification to our customers regarding the quality control measures employed in our manufacturing and assembly processes.

Insurance

We currently have property insurance coverage, including business interruption coverage, for our production facilities in Gumi and Paju, Korea, for up to \text{\t

Environmental Matters

Our production processes generate various forms of chemical and other industrial waste, waste water and greenhouse gas emissions at various stages in the manufacturing process. We have installed various types of anti-pollution equipment for the treatment and recycling of such waste products and aggressively engage in greenhouse gas emission reduction and energy conservation efforts.

As a member of the World Display device Industry Cooperation Committee, or WDICC, a TFT-LCD industry organization focusing on environmental issues, we have voluntarily agreed to reduce emission of greenhouse gases, such as nitrogen trifluoride, or NF3, and sulfur hexafluoride, or SF6, gases, by developing and adopting cost-effective abatement technologies and systems and increasing the number of abatement systems installed in our facilities. We installed NF3 abatement systems at all of our production lines when the production facilities were being constructed. In addition, we have voluntarily installed SF6 abatement systems in P61 and P7, and we have voluntarily developed processes that utilize substitute gases with lower global warming potential than SF6 and have applied such processes in P62, P8 and P9.

In the case of the European Union's Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU, with the adoption of Directive (EU) 2015/863 in 2016, four additional substances (four phthalate substances) will be added to the six already restricted substances and the additional restrictions are scheduled to come into effect on July 22, 2019. In order to address the latent risk elements of the four phthalate substances scheduled to be restricted in 2019 and to establish a more stable management system, we implemented in 2016 a preemptive response process with respect to such four phthalate substances. In implementing this process, we collaborated with external agencies to ascertain regulatory trends and establish our response strategy, and we formulated and applied effective management measures through the collaborative efforts of our development, procurement and quality teams. Beryllium (Be) was not designated internationally as a mandatorily restricted substance but has continued to be the subject of discussion for restriction, and certain of our customers have designated it as a restricted substance not to be used in products. Accordingly, we have completed verification of the parts used in products for customers who have banned the use of beryllium. We have also conducted verification process for parts in development. Through such efforts, we have established a voluntary hazardous substance response process that can be expanded to products for all customers, not only those who have requested a response. For the more efficient operation of our waste water treatment equipment, we have also entered into an agreement with HiEntech, a wholly owned subsidiary of LG Electronics, for the operation of our water treatment system.

Operations at our manufacturing plants are subject to regulation and periodic scheduled and unscheduled on-site inspections by the Korean Ministry of Environment and local environmental protection authorities. We believe that we have adopted adequate antipollution measures for the effective maintenance of environmental protection standards consistent with local industry practice, and that we are in compliance in all material respects with the applicable environmental laws and regulations in Korea, including the Framework Act on Low Carbon, Green Growth, the Korean government, under which we are required to submit periodic greenhouse gas emission and energy usage statements, performance reports and greenhouse gas emission and energy usage reduction plans to the Korean government. Expenditures related to such compliance may be substantial and are generally included in capital expenditures. As required by Korean law, we employ licensed environmental specialists for each environmental area, including air quality, water quality, toxic materials and radiation.

We have been certified by the Korean Ministry of Environment as a "Green Company", with respect to our environmental record for our P1 facility in Gumi. In addition, we have received ISO 14001 and ISO 50001 certifications from the International Organization for Standardization with respect to our energy management systems for our P1 through P9 facilities and our Gumi and Paju module production plants. Our module production plants in Nanjing, Yantai and Guangzhou, China have also received ISO 14001 certification. Our GP1 fabrication facility was the first plant in China to receive the "Green Plant" designation under China's Green China Policy. Our GP1 fabrication facility has also received ISO 14001 and OHSAS 18001 certifications. Furthermore, in recognition of our continued water conservation activities (reuse system investments, etc.) and greenhouse gas emission reduction activities (process gas and energy reduction, etc.), we attained the highest level, Leadership A, and received the grand prize award at the CDP Water Korea Best Awards in 2016 from the Carbon Disclosure Project, which was presided over by the Carbon Disclosure Project Korea Committee. We also attained a Leadership A in the climate change information technology sector and received a Carbon Management Honors award in both 2016 and 2017. In 2017, in recognition of efficient control, management and operating systems implemented in our manufacturing facilities, we received the top-level certification, Level 1, under the Factory Energy Management System evaluation presided by the Korea Energy Agency. Furthermore, in November 2017, we received the highest commendation, the Presidential Award, in the Korean Energy Efficiency Awards presided by the Korean Ministry of Industry, Trade and Energy in recognition of our energy management practices and energy saving measures, and we also obtained a certificate of excellence in the Energy Management System Evaluation from the same ministry. In May 2018, we received the Clean Energy Ministerial Insight Award, presented at the Clean Energy Ministerial Meetings, and also received certification for our energy business management (Energy Champion) presided by the Ministry of Trade, Industry and Technology and the Korea Energy Agency in November 2018. Additionally, in 2018, we became the first display panel company to receive the "Green Technology Certification" from the Korean Ministry of Science and ICT for improving the light efficiency technology of OLED to promote energy savings.

Joint Ventures

We consider joint ventures an important part of our business, both operationally and strategically. We have used joint ventures to enter into new geographic markets, in particular China, to gain new customers and/or strengthen positions with existing customers and to procure certain components and raw materials. When entering new geographic markets where we do not have substantial local experience and infrastructure, teaming up with a local partner can reduce capital investment by leveraging the pre-existing infrastructure of local partners. In addition, local partners in these markets can provide knowledge and insight into local customs and practices and access to local suppliers of raw materials and components. All of these advantages can reduce the risk, and thereby enhance the prospects for the success, of an entry into a new geographic market. If the partner of the joint venture already has an established customer base, it can also be an effective means to acquire such new customers. Joint venture arrangements also allow us to access technology we would otherwise have to develop independently, thereby reducing the time and cost of development. They can also provide the opportunity to create synergies and applications of technology that would not otherwise be possible.

From time to time, we have pursued a number of joint venture initiatives. For example, in September 2012, we entered into a joint venture agreement with Guangzhou GET Technologies Development Co., Ltd., or GET Tech, and Shenzhen SKYWORTH-RGB Electronic Co., Ltd., or Skyworth, establishing LG Display (China) Co., Ltd., which owns and operates our GP fabrication facility in Guangzhou, China. See "Item 4.D. Property, Plants and Equipment— Current Facilities." We acquired a 70.0% equity interest in LG Display (China) and invested a total of approximately US\$927 million over a period of two years from the date of incorporation of LG Display (China). Each of GET Tech and Skyworth owns a 20.0% and 10.0% equity interest in LG Display (China), respectively. In addition, in July 2018, we established and acquired a 69% ownership interest in, a joint venture with the government of Guangzhou to construct a next generation large-sized OLED production line in Guangzhou, China. Production at the joint venture is expected to commence during 2019, and we plan to invest approximately \(\frac{\psi}{2}\).0 trillion in the joint venture.

We intend to continue to seek strategic acquisition and joint venture opportunities and conduct feasibility studies with respect to establishing new manufacturing subsidiaries in strategic locations to deepen our market penetration, achieve economies of scale, increase our customer base, expand our geographical reach and reduce costs.

Subsidiaries

The following table sets forth summary information for our subsidiaries as of December 31, 2018:

Subsidiary	Main Activities	Jurisdiction of Organization	Date of Organization		ital Equity	Percentage of Our Ownership Interest	Percentage of Our Voting Power
LG Display Taiwan Co., Ltd.	Sales	Taiwan	April 1999	NT\$	115,500,000	100%	100%
LG Display America, Inc.	Sales	U.S.A.	September 1999	US\$	411,000,000	100%	100%
LG Display Japan Co., Ltd.	Sales	Japan	October 1999	¥	95,000,000	100%	100%
LG Display Germany GmbH	Sales	Germany	November 1999	€	960,000	100%	100%
LG Display Nanjing Co., Ltd.	Manufacturing	China	July 2002	RMB	3,019,662,545	100%	100%
LG Display Shanghai Co., Ltd.	Sales	China	January 2003	RMB	4,138,650	100%	100%
LG Display Poland Sp. zo.o.	Manufacturing	Poland	September 2005	PLN	511,071,000	100%	100%
LG Display Guangzhou Co., Ltd.	Manufacturing	China	June 2006	RMB	1,654,693,079	100%	100%
LG Display Shenzhen Co., Ltd.	Sales	China	August 2007	RMB	3,775,250	100%	100%
LG Display Singapore Pte. Ltd.	Sales	Singapore	January 2009	SG\$	1,400,000	100%	100%
LG Display Yantai Co., Ltd.	Manufacturing	China	April 2010	RMB	1,007,720,600	100%	100%
L&T Display Technology (Fujian) Ltd.	Manufacturing and sales	China	January 2010	RMB	59,197,026	51%	51%
Nanumnuri Co., Ltd.	Workplace services	Korea	March 2012	₩	800,000,000	100%	100%
LG Display (China) Co., Ltd.	Manufacturing and sales	China	December 2012	RMB	5,763,206,733	70%	70%
Unified Innovative Technology, LLC	Managing intellectual property	U.S.A.	March 2014	US\$	9,000,000	100%	100%
Global OLED Technology LLC	Managing intellectual property	U.S.A.	December 2009	US\$	138,010,000	100%	100%
LG Display Guangzhou Trading Co., Ltd.	Sales	China	April 2015	RMB	1,223,960	100%	100%
LG Display Vietnam Haiphong Co., Ltd.	Manufacturing	Vietnam	May 2016	VND 1 US\$	2,187,870,000,000 200,000,000	100%	100%
Suzhou Lehui Display Co., Ltd.	Manufacturing and sales	China	July 2016	RMB	636,973,641	100%	100%
LG Display Fund I LLC	Investing in new emerging companies	U.S.A.	July 2018	US\$	2,000,000	100%	100%
LG Display High-Tech (China) Co., Ltd	Manufacturing	China	July 2018	RMB	4,504,600,000	69%	69%
Money Market Trust	Money market trust	Korea	Not applicable	₩	24,501,000,000	100%	_

N.B. See Note 1(b) of the notes to our financial statements for changes to our subsidiaries during the year ended December 31, 2018.

Item 4.C. Organizational Structure

These matters are discussed under Item 4.B. where relevant.

Item 4.D. Property, Plants and Equipment

Current Facilities

The following table sets forth the size, location and primary use of our fabrication facilities.

	G 4 (1)	Mass Production		Gross Floor Area	
Fabrication Facility	Generation(1)	Commencement	Location	(in square meters)	Primary Types of Panels Produced
P2 (2)	3.5	December 1997	Gumi, Korea	71,149	Automotive
P3 (3)	4	April 2000	Gumi, Korea	71,149	Mobile, Automotive
P4 ⁽⁴⁾	5	March 2002	Gumi, Korea	93,277	Mobile, Notebook Computer,
					Desktop Monitor, Tablet
					Computer, Automotive
P5 (5)	5	May 2003	Gumi, Korea	93,277	Mobile, Notebook Computer,
					Automotive, Industrial
P61 (6)	6	August 2004	Gumi, Korea	288,602	Mobile, Desktop Monitor,
					Tablet Computer,
					Automotive
P62	6	April 2009	Gumi, Korea	101,607	Notebook Computer,
					Desktop Monitor, Television
P7	7	January 2006	Paju, Korea	312,048	Television, Desktop Monitor
P8 (7)	8	March 2009	Paju, Korea	542,795	Television, Desktop Monitor
P9 ⁽⁸⁾	8	June 2012	Paju, Korea	455,439	Desktop Monitor, Notebook
					Computer, Tablet Computer
GP ⁽⁹⁾	8	September 2014	Guangzhou, China	245,159	Television
Ochang (10)	2	January 2012	Ochang, Korea	7,129	OLED General Lighting,
					Automotive
E5	6	August 2017	Gumi, Korea	10,579	Mobile and other
					applications

⁽¹⁾ Based on internal reference to evolutions in facility design, material flows and input substrate sizes. There are several definitions of "generations" in the display industry. There has been no consensus in the display industry on a uniform definition. References to generations made in this annual report are based on our current definition of generations as indicated in the table below.

Substrate Sizes (in millimeters)	Gen 2	Gen 3	Gen 4	Gen 5	Gen 6	Gen 7	Gen 8
	370 x 470	550 x 650	680 x 880	1,000 x 1,200	1,500 x 1,800	1,870 x 2,200	2,200 x 2,500
		590 x 670	730 x 920	1,100 x 1,250	1,500 x 1,850	1,950 x 2,250	
		600 x 720		1,100 x 1,300			
		620 x 750		1,200 x 1,300			
		650 x 830					

- (2) We ceased production and closed P2 fabrication facility in June 2017.
- (3) We ceased production and closed P3 fabrication facility in February 2018.
- (4) We ceased production and closed P4 fabrication facility in October 2017.
- (5) Gross floor area of P5 fabrication facility includes gross floor area of OLED light production lines.
- (6) Gross floor area of P61 fabrication facility includes gross floor area of AP3 production line. We ceased production and closed P61 in June 2016 except for AP3 production line.
- (7) Gross floor area of P8 fabrication facility includes gross floor area of AP2, E2 and E3 production lines.
- (8) Gross floor area of P9 fabrication facility includes gross floor area of E4 production lines and is based on the area for which regulatory use approval has been granted.
- (9) Gross floor area of GP fabrication facility includes gross floor area of extended facility.
- (10) We ceased production and closed our Ochang fabrication facility in January 2018.

For input substrate size, initial design capacity and year-end input capacity as a result of ramp-up for each of our fabrication facilities, please see "Item 5.A. Operating Results—Overview—Manufacturing Productivity and Costs."

Housed within certain fabrication facilities, we also operate separately designated fabrication production lines. The following table sets forth the location and primary use of our separately designated production lines.

	Mass Production		
Generation (1)	Commencement	Location	Primary Types of Panels Produced
4	July 2010	P8	LTPS backplanes for mobile and others
6	February 2014	P61	LTPS backplanes for mobile and others
4	December 2013	P8	OLED mobile
8	January 2013	P8	OLED television
8	December 2014	P9	OLED television
	Generation (1) 4 6 4 8 8	Commencement 4 July 2010	Generation (1) Commencement Location 4 July 2010 P8 6 February 2014 P61 4 December 2013 P8 8 January 2013 P8

We also operate module assembly facilities in China (Nanjing, Guangzhou and Yantai), Korea (Gumi and Paju), Poland (Wroclaw) and Vietnam (Haiphong). In addition, we operate a research and development facility in Paju, Korea, which we refer to as the R&D Center. We opened the R&D Center in April 2012 to consolidate our research and development efforts for next-generation display technologies. The following table sets forth the size of our R&D Center and module assembly facilities.

Facility	Gross Floor Area (in square meters)	Mass Production Commencement
R&D Center	71,696	Not applicable (opened in April 2012)
Gumi assembly facility	301,779	January 1995
Nanjing assembly facility	150,760	May 2003
Paju assembly facility	226,758	January 2006
Wroclaw assembly facility	106,929	February 2007
Guangzhou assembly facility	139,095	December 2007
Yantai assembly facility	81,256	May 2010
Haiphong assembly facility	347,100	July 2017

Capital Expenditures

As part of our ongoing expansion plans, we are in the process of constructing several manufacturing facilities for OLED panels, including our E6 production lines for plastic OLED panels, and we have commenced mass production of plastic OLED panels on our E5 production line beginning in August 2017. In July 2017, we announced plans to make investments in an aggregate amount of up to \(\frac{\text{W}}{7.8}\) trillion in new large-size OLED and plastic production lines in Paju, Korea. We are in the process of developing and assessing the specifics of such planned investments, including the timing. In response to and in anticipation of growing demand in the China market, in July 2017, we announced our plan to establish a joint venture with the government of Guangzhou to construct a next generation large-sized OLED production line, which was established under the name of LG Display High-Tech (China) Co., Ltd., in July 2018. We currently hold a 69% ownership interest in the joint venture and the government of Guangzhou holds the remaining 31% ownership interest. We plan to invest approximately \(\frac{\text{W}}{5.0}\) trillion in the joint venture, which is expected to commence production during 2019.

We currently expect that, in 2019, our total capital expenditures on a cash out basis will be at a similar level to 2018, primarily to fund our previously announced investments related to facilities for OLED panels. This amount is subject to periodic assessment, and we cannot provide any assurance that this amount may not change materially after assessment. We may undertake further expansion projects in the future with respect to our existing facilities as our overall business strategy may require.

Item 4A. UNRESOLVED STAFF COMMENTS

We do not have any unresolved comments from the SEC staff regarding our periodic reports under the Exchange Act.

Item 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Item 5.A. Operating Results

Overview

Our results of operations are affected principally by overall market conditions, our manufacturing productivity and costs, and our product mix.

⁽¹⁾ Based on internal reference to evolutions in facility design, material flows and input substrate sizes.

Market Conditions

The display industry in which we operate is affected by market conditions that are often outside the control of individual manufacturers. Our results of operations might fluctuate significantly from period to period due to market factors, such as seasonal variations in demand, surges in production capacity by competitors and changes in technology. Over the past decade, the display industry has grown significantly as a result of cost reductions and product improvements that stimulated demand for TFT-LCD and OLED panels. With respect to the TFT-LCD industry, the industry grew from 586 million units in 2004 to 2,701 million units in 2018 and market revenue grew from US\$49 billion to US\$89 billion during the same period according to IHS Technology.

While TFT-LCD panels are still predominant in the display industry, the industry in recent years has witnessed the introduction of alternative display panels based on new technologies, such as OLED panels. In particular, we and some of our competitors have already commenced mass production of OLED panels. Currently, small-sized panels for use in mobile devices such as smartphones make up the bulk of the OLED panel market, accounting for almost 93% of industry revenue from global sales of OLED panels in 2018. However, as of 2018, the OLED market was relatively small compared to the TFT-LCD market. We believe, however, that the market may change rapidly as a growing array of OLED panels for various applications and sizes are introduced to the market and advances in the related technology and manufacturing processes enable mass production in a cost-efficient manner. In 2014, we commenced mass production of 55-inch, 65-inch and 77-inch Ultra HD OLED television panels earlier than our competitors on our E4 production lines. In August 2017, we began production of plastic OLED panels for mobile and other applications on our E5 production line.

While the display industry has grown rapidly, it has also experienced business cycles with significant and rapid price declines from time to time. Historically, display panel manufacturers have increased display area fabrication capacity rapidly. Capacity expansion occurs especially rapidly when several manufacturers ramp-up new factories at the same time. During such surges in the rate of supply growth, our customers are able to exert downward pricing pressure, leading to sharp declines in average selling prices and significant fluctuations in our gross margin. In addition, regardless of relative capacity expansion, we expect average selling prices of our existing products to decline as the cost of manufacturing declines due to technology advances and component cost reductions. Conversely, constraints in the industry supply chain or increased demand for new technology products have led to increased prices for display panels in some past periods.

According to IHS Technology, the display industry for panels that are nine inches or larger contracted in 2018 compared to 2017, with total market revenue decreasing from US\$67 billion in 2017 to US\$63 billion in 2018. The average selling price of those panels decreased during the same period by approximately 16% from approximately US\$96 in 2017 to US\$81 in 2018.

We strive to mitigate the effect of industry cyclicality and the resulting price fluctuations by planning capacity expansions and capacity allocations, or shifting our product mix, to capture premium prices in specific emerging product categories. As part of our strategy, we have been proceeding with the construction of new fabrication facilities and additional investments to upgrade and convert existing facilities and production lines to produce differentiated specialty display panels based on newer technologies that command higher premiums. See "Item 4.D. Property, Plants and Equipment—Capital Expenditures."

In addition, we are vigorously pursuing our strategy to develop differentiated specialty products and technologies that better address our customers' needs, thereby delivering greater value to our customers. In many cases, these efforts go hand-in-hand with our efforts to develop products based on new technologies that allow us to realize greater premiums. For example, we have allocated significant resources to the development and production of specialized OLED panels for television and public displays (such as our "Wallpaper" OLED panels, "Crystal Sound OLED" sound integrated panels, and rollable OLED display panels), display panels utilizing AH-IPS technology for various tablet computers, smartphones, notebook computers, desktop monitors and other applications and plastic OLED technology for smartphones and smartwatches. In particular, we are deploying greater resources into large-sized OLED television panels in order to maintain our early competitive edge in such market, and into small- and medium-sized plastic OLED panels for various applications in order to expand our market presence.

Another key aspect of our strategy is to foster close cooperation with our customers and build on our strategic relationships with many of our key suppliers. Success of a new product depends on, among other things, working closely with our customers to gain insights into their product needs and to understand general trends in the market. At the same time, we often work with our equipment suppliers to design equipment that can enhance the efficiency of our production processes for such new products.

Manufacturing Productivity and Costs

We seek to continually enhance our manufacturing productivity and thereby reduce the cost of producing each panel. We have significantly expanded our production capacity by investing in fabrication facilities that can process increasingly larger-size glass substrates. The following table shows the input substrate size, initial design capacity and year-end input capacity as a result of ramp-up for each of our fabrication facilities as of the dates indicated:

	Initial Primary Input Design Capacity		Year-ei	nd Input Capa	acity(1)
Facility	Substrates Size (in millimeters)	(in input substrates per month)	2016 (in input	2017 substrates per	2018 month)
P2 ⁽²⁾	590x670	60,000	38,000	42,000	N/A
P3 ⁽³⁾	680x880	60,000	32,000	37,000	N/A
P4 ⁽⁴⁾	1,000x1,200	60,000	92,000	27,000	N/A
P5	1,100x1,250	60,000	82,000	69,000	76,000
P61 ⁽⁵⁾	1,500x1,850	90,000	75,000	36,000	36,000
P62	1,500x1,850	60,000	50,000	49,000	45,000
P7	1,950x2,250	90,000	229,000	230,000	230,000
P8 ⁽⁶⁾	2,200x2,500 730x920	339,000	362,000	359,000	315,000
P9(7)	2,200x2,500	60,000	60,000	68,000	82,000
GP	2,200 x 2,500	60,000	151,000	211,000	213,000
Ochang ⁽⁸⁾	370 x 470	4,000	2,500	3,000	N/A
E5 ⁽⁹⁾	1,500x925	16,265	N/A	6,289	8,943

N/A = Not applicable.

- (1) Year-end input capacity is the total input substrates for the month that had the highest monthly input substrates during the fiscal year.
- (2) We ceased production and closed P2 fabrication facility in June 2017.
- (3) We ceased production and closed P3 fabrication facility in February 2018.
- (4) We ceased production and closed P4 fabrication facility in October 2017.
- (5) Includes input capacity of AP3 production line. We otherwise ceased production and closed P61 in June 2016 except for our AP3 production line.
- (6) Includes input capacity of AP2, E2 and E3production lines.
- 7) Includes input capacity of E4 production line.
- (8) We ceased production and closed our Ochang fabrication facility in January 2018.
- (9) Commenced operation in August 2017.

Our cash outflows for capital expenditures amounted to \(\psi_3,736\) billion in 2016, \(\psi_6,592\) billion in 2017 and \(\psi_7,942\) billion (US\$7,137\) million) in 2018. Such capital expenditures relate mainly to continued investments in Guangzhou, China, (including the construction of our next generation large-sized OLED production line in a joint venture with the government of Guangzhou) and investments in our E5 and E6 production lines in each of these years. Capital expenditures were also incurred for the acquisition of new equipment during the same period. Our depreciation expense as a percentage of revenue remained stable at 10.0% in each of 2016 and 2017 and increased to 12.8% in 2018. Such increase in 2018 compared to 2017 was a result of an increase in our depreciation expense, which in turn was mainly attributable to an increase in our property, plant and equipment, while our revenue decreased over the same period of time. We currently expect that, in 2019, our total capital expenditures on a cash out basis will be at a similar level to 2018, primarily to fund our previously announced investments related to facilities for OLED panels. This amount is subject to periodic assessment, and we cannot provide any assurance that this amount may not change materially after assessment.

Since our inception, we have designed our fabrication facilities in-house and co-developed most equipment sets with our suppliers. These efforts have enabled us to gain valuable experience in designing and operating next-generation fabrication facilities capable of processing increasingly larger-size glass substrates. We have been able to leverage this experience to achieve and maintain high production output and yields at our fabrication facilities, thereby lowering costs. In addition, in recent years, we have substituted a portion of our equipment purchased from overseas vendors with purchases from local vendors to diversify our supply source and reduce costs. We also fabricate certain components internally, such as color filters, which are one of the industry's higher-cost components.

We also continue to make various process improvements at our fabrication facilities, including enhancing the performance of process equipment, efficiency of material flows and quality of process and product designs. For example, we have reduced the number of mask steps in the TFT process from four to three with respect to certain models, thereby enabling us to process a higher number of substrates in a given period of time. Such process improvements result in increased unit output of our fabrication facilities without significant capital investment, thus enabling us to reduce fixed costs on a per panel basis. In addition, in commencing mass production of large-sized OLED products, we have made modifications to certain of our existing TFT-LCD production lines to convert them into OLED panel production lines. Because our large-sized OLED panels employ oxide TFT backplane technology, which can be produced using manufacturing processes similar to the processes used to manufacture TFT-LCD panels, relatively little modification has been necessary, thereby reducing the costs of additional investments needed for the conversion of our production lines.

Raw materials comprise the largest component of our costs. We monitor the prices at which we can procure raw materials from suppliers and to the extent overseas suppliers are able to provide raw materials at competitive prices, we have diversified our supplier base by procuring raw materials from such overseas suppliers. We have also been able to leverage our scale and leading industry position to obtain competitive prices from our suppliers.

The size of our operations has also expanded considerably in recent years, enabling us to benefit from economies of scale. As a result of the above factors, our cost of sales per square meter of net display area, which is derived by dividing total costs of sales by total square meters of net display area shipped, decreased by 2.7% from 2016 to 2017 and further decreased by 6.5% in 2018.

Product Mix

Our product mix reflects our strategic capacity allocation among various product markets, and is continually reviewed and adjusted based on the demand for, and our assessment of the profitability of, display panels in different markets and size categories. In recent years, we believe market demand has been shaped by a shift toward larger-sized panels, especially in the television, desktop and smartphone panel markets, and a shift toward differentiated specialty products based on newer technologies, especially in the display panel markets for Ultra HD televisions, ultra-thin notebooks, tablet computers and smartphones. In response to such market trends, we have increased our production capacity and sales of larger-sized panels, as well as developing and commercializing differentiated specialty products for a variety of applications. For example, with respect to our television display panel product portfolio, the proportion of sales of our 55-inch, 65-inch, 75-inch and 86-inch television panels in our product mix increased between 2016 and 2018. In addition, with respect to our desktop monitor products, we have expanded our product portfolio to offer panels with Full HD resolution ranging from 21.5 inches to 49 inches in a variety of screen aspect ratios, including 21:9 screen aspect ratio for ultrawidescreen monitors, and additional features such as borderless bezels and curved displays, in order to capture the market for large-size desktop monitors. In early 2019, as part of our efforts to further broaden the range of sizes of our desktop monitor products, we showcased sample larger-sized monitors, including our 55-inch OLED desktop monitor, through collaboration with our strategic customers. We have also increased our production capacity of mobile panels for large-screen smartphones, which constitutes a part of our mobile and other applications segment, with specialty features and newer technologies, including full screen displays, flexible displays and Ultra HD technology utilizing WRGB sub-pixel structure. At the same time, in response to increasing market demand for differentiated specialty products, we have developed and commercialized, for example, tablet computer panels utilizing AH-IPS technology with increasingly higher resolution and other features, smartphone and smartwatch panels utilizing plastic OLED technology and large-sized television panels utilizing our Ultra HD and OLED technologies.

The following table sets forth our revenue by product category for the years indicated and revenue in each product category as a percentage of our total revenue:

	Year ended December 31,						
	2016		2017		2018		
	Sales	%	Sales	%	Sales	Sales(3)	%
Panels for:	(in l	oillions of V	W <mark>on and m</mark> i	llions of US	S\$, except fo	r percentages)	
Televisions	₩ 10,133	38.2%	₩11,718	42.2%	₩ 9,727	US\$ 8,741	40.0%
Notebook computers	2,384	9.0	2,244	8.1	2,837	2,549	11.7
Desktop monitors(1)	4,035	15.2	4,393	15.8	4,040	3,630	16.6
Tablet computers	2,696	10.2	2,370	8.5	1,991	1,789	8.2
Mobile and other applications(2)	7,216	27.2	7,020	25.3	5,699	5,121	23.4
Sales of goods	W 26,464	99.8%	W 27,745	99.8%	W 24,294	US\$ 21,830	99.8%
Royalties and others	40	0.2	45	0.2	43	38	0.2
Revenue	₩ 26,504	100.0%	₩27,790	100.0%	₩24,337	US\$ 21,868	100.0%

⁽¹⁾ Includes desktop monitors manufactured and sold by our joint venture company L&T Display Technology (Fujian) Limited.

⁽²⁾ Includes, among others, panels for mobile devices, including smartphones and other types of mobile phones, and industrial and other applications, including entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment.

(3) For convenience, the Korean Won amounts are expressed in U.S. dollars at the rate of \(\pi\)1,112.85 to US\\$1.00, the noon buying rate in effect on December 31, 2018 as certified by the Federal Reserve Bank of New York for customs purposes. This translation should not be construed as a representation that the Korean Won amounts represent, have been or could be converted to U.S. dollars at that rate or any other rate.

The following table sets forth our sales volume by product category for the years indicated and as a percentage of our total panels sold:

	Year ended December 31,						
	2016		2017		2018		
	Number of		Number of		Number of		
Panels for	Panels	%	Panels	%	Panels	%	
	(in thousands, except for percentages)						
Televisions	52,916	16.0%	52,108	18.1%	51,966	20.8%	
Notebook computers	39,672	12.0	26,999	9.4	30,471	12.2	
Desktop monitors (1)	40,001	12.1	37,000	12.8	36,693	14.7	
Tablet computers	24,957	7.5	26,255	9.1	25,015	10.0	
Mobile and other applications (2)	173,166	52.4	146,162	50.7	105,142	42.2	
Total	330,712	100.0%	288,524	100.0%	249,287	100.0%	

1) Includes desktop monitors manufactured and sold by our joint venture company L&T Display Technology (Fujian) Limited.

(2) Includes, among others, panels for mobile devices, including smartphones and other types of mobile phones, and industrial and other applications, including entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment.

Average Selling Prices

Our product mix has an impact on our average selling prices. In addition to business cycles, industry-wide supply and demand balances and other market- or industry-wide variables, our product cost and price vary with the product display area, as well as the technology and specification of such product. Therefore, the average selling price of our products can vary over time as a result of business cycles and the choices we make in capacity allocation for specific products. The overall average selling price of our display panels can fluctuate significantly. Our average selling price per panel, which is derived by dividing total sales of goods by the total number of panels sold, increased by 20.2% from \text{W}80,021 in 2016 to \text{W}96,162 in 2017 and further increased by 1.3% to \text{W}97,454 (US\$88) in 2018. In 2017 compared to 2016, our average selling price increased primarily due to an increase in the average selling price for large-sized panels, which was mainly attributable to a continued increase in demand for higher-end products from our customers. In 2018 compared to 2017, our average selling price further increased primarily due to an increase in the average selling price of panels for notebook computers and mobile and other applications, which in turn was mainly attributable to an increase in demand for higher-end products with more advanced technologies and differentiated features from our customers in these product categories.

The following table sets forth our average selling price per panel by markets for the years indicated:

		Average Selling Price ⁽³⁾				
		Year ended December 31,				
	2016	2017	2018	3(4)		
Televisions	W 191,492	W 224,879	₩187,180	US\$168		
Notebook computers	60,093	83,114	93,105	84		
Desktop monitors ⁽¹⁾	100,872	118,730	110,103	99		
Tablet computers	108,026	90,269	79,592	72		
Mobile and other applications ⁽²⁾	41,671	48,029	54,203	49		
All panels	80,021	96,162	97,454	88		

(1) Includes desktop monitors manufactured and sold by our joint venture company L&T Display Technology (Fujian) Limited.

(3) Average selling price for each market represents revenue per market divided by unit sales per market.

⁽²⁾ Includes, among others, panels for mobile devices, including smartphones and other types of mobile phones, and industrial and other applications, including entertainment systems, automotive displays, portable navigation devices and medical diagnostic equipment.

⁽⁴⁾ For convenience, the Korean Won amounts are expressed in U.S. dollars at the rate of \(\frac{\psi}{1}\), 112.85 to US\$1.00, the noon buying rate in effect on December 31, 2018 as certified by the Federal Reserve Bank of New York for customs purposes. This translation should not be construed as a representation that the Korean Won amounts represent, have been or could be converted to U.S. dollars at that rate or any other rate.

Critical Accounting Policies

We have prepared our consolidated financial statements in accordance with IFRS as issued by the IASB. These accounting principles require us to make certain estimates and judgments that affect the reported amounts in our consolidated financial statements. Our estimates and judgments are based on historical experience, forecasted future events and various other assumptions that we believe to be reasonable under the circumstances. Estimates and judgments may differ under different assumptions or conditions. We evaluate our estimates and judgments on an ongoing basis. We believe the critical accounting policies discussed below are the most important to the portrayal of our financial condition and results of operations. Each of them is dependent on projections of future market conditions and they require us to make the most difficult, subjective or complex judgments. For a further description of the significant accounting policies and methods used in the preparation of our consolidated financial statements and new standards and amendments not yet adopted, see Note 3 of the notes to our financial statements.

Inventories

We state our inventory at the lower of cost and net realizable value. We make adjustments to reduce the cost of inventory to its net realizable value, if required, for estimated excess, obsolescence or impaired balances. Factors influencing these adjustments include changes in demand, technological changes, product life cycle, component cost trends, product pricing, and physical deterioration. Revisions to these adjustments would be required if these factors differ from our estimates. If future demand or market conditions for our products are less favorable than forecasted, we may be required to recognize additional write-downs, which would negatively affect our results of operations in the period in which the write-downs are recognized. The write-downs of inventories remained relatively constant at \text{\text{\$\psi}}204 billion as of December 31, 2016 and at \text{\text{\$\psi}}206 billion as of December 31, 2017, but increased to \text{\$\psi}313 billion (US\$281 million) in 2018. The increase as of December 31, 2018 compared to December 31, 2017 was due primarily to an increase in our inventory level. The amount of any such adjustment is recognized as cost of sales in the period for which the assessment relates.

In 2018, we reclassified mask and mold, which had previously been classified as inventories, as part of our property, plant and equipment, due to our expectation that such materials will be used for a period exceeding one year. As a result of such change, the amount of our inventories as of January 1, 2018 decreased by \text{\psi}111 billion (US\\$100 million) while property, plant and equipment increased by the same amount. See "—Long-Lived Assets: Useful Lives, Valuation and Impairment."

Income Taxes

We have significant deferred income tax assets that may be used to offset taxable income in future periods. Our ability to utilize deferred income tax assets is dependent on our ability to generate future taxable income sufficient to utilize these deferred income tax assets before their expiration. Changes in estimates of our ability to realize our deferred tax assets are generally recognized in earnings as a component of our income tax (benefit) expense. At each reporting date, we review our deferred tax assets for recoverability considering historical profitability, projected future taxable income, the expected timing of reversals of existing temporary differences and expiration of unused tax losses and tax credits. If we are unable to generate sufficient future taxable income, or if we are unable to identify suitable tax planning strategies, the deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realized. An increase in unrecognized deferred tax assets would result in an increase in our effective tax rate and could materially adversely impact our operating results. Conversely, if conditions improve and we determine that previously unrecognized deferred tax assets should be recognized because of changes in estimates of future taxable income or other conditions that affect our expected recovery of deferred tax assets, this would result in an increase in reported earnings in such period. In 2016, we did not recognize W73 billion of deferred tax assets comprising tax credit carryforwards as it was no longer probable that such deferred tax assets would be utilized due to changes in estimates of future taxable income. In 2017, we reversed \times 12 billion of such previously unrecognized tax credit carryforwards as it became probable that sufficient taxable profit would be available in light of improved market conditions. In 2018, we did not recognize \text{\$\psi 65}\$ billion (US\$58 million) of deferred tax assets comprising tax credit carryforwards as it was no longer probable that such deferred tax assets would be utilized due to changes in estimates of future taxable income. See Note 23 of the notes to our financial statements. If the unrecognized deferred tax assets are recognized as deferred tax assets in a future period, the effective tax rate for the period could decrease. In estimating projected future taxable income, we considered a variety of factors, including recent overcapacity issues in the display industry and the industry-wide response to scale back capacity expansion plans and adjust utilization rates, as well as trends in demand for display products.

Provisions - Warranty Obligations

We recognize a provision for warranty obligations based on the estimated costs that we expect to incur under our basic limited warranty for our products. This warranty covers defective products and is normally valid for 18 months from the date of purchase. These liabilities are accrued when product revenue are recognized. Warranty costs primarily include raw materials and labor costs. Factors that affect our warranty liability include historical and anticipated rates of warranty claims on repairs, calculated based on our sales volume and cost per claim to satisfy our warranty obligation. There were no changes in assumptions or methods used which had a significant impact on the amount of warranty obligations from 2016 to 2018. As these factors are impacted by actual experience and future expectations, we periodically assess the adequacy of our recorded warranty liabilities and adjust the amounts as necessary. We recognized warranty obligations amounting to \(\pi\62\) billion, \(\pi\102\) billion and \(\pi\122\) billion (US\$110 million) as of December 31, 2016, 2017 and 2018, respectively. Warranty expenses increased from \(\pi\167\) billion in 2016 to \(\pi\251\) billion in 2017, but decreased to \(\pi\255\) billion (US\$211 million) in 2018. The increase in 2017 compared to 2016 was attributable primarily to higher quality expectations for panel products. The decrease from 2017 to 2018 was due primarily to a decrease in our sales revenue.

Long-Lived Assets: Useful Lives, Valuation and Impairment

Property, plant and equipment are recorded at cost less accumulated depreciation over the estimated useful lives of the individual assets, with depreciation calculated on a straight line basis. The determination of an asset's useful life and salvage value requires judgment based on our historical and anticipated use of the asset. Since 1999, all new machinery is being depreciated on a straight-line basis over four or five years. For goodwill and other intangible assets that have indefinite useful lives or that are not yet available for use, as the case may be, the recoverable amount is estimated each year at the same time irrespective of whether there is any indication of impairment.

We review the carrying amounts of long-lived assets or cash-generating units at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the recoverable amount of the relevant asset or cash generating unit is estimated. If circumstances require that a long-lived asset or cash-generating unit be tested for possible impairment, and the carrying value of such long-lived asset or cash-generating unit is considered impaired after such test, an impairment charge is recorded for the amount by which the carrying value of the long-lived asset or cash-generating unit exceeds its estimated recovery value. The recoverable amount of a long-lived asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. Fair value is determined by employing a variety of valuation techniques as necessary, including discounted cash flow models, quoted market values and third-party independent appraisals. The determination of the value in use and the fair value requires our judgments and assumptions about future operations. The determination of an asset's useful life, and the potential impairment of our long-lived assets could have a material effect on our results of operations. We recognized impairment losses of \text{\text{\$\text{\$W}\$1.6 billion in 2016, nil in 2017 and \text{\text{\$\text{\$\text{\$\text{\$W}\$43.6 billion (US\$39.5 million) in 2018.}}

In 2018, we reclassified mask and mold, which had previously been classified as inventories, as part of our property, plant and equipment, due to our expectation that such materials will be used for a period exceeding one year. Accordingly, we changed our estimate of the useful lives of mask and mold to two years. As a result of such change, the amount of our property, plant and equipment as of January 1, 2018 increased by \(\frac{\psi}{111}\) billion. Such change also had the effect of decreasing our depreciation expense by \(\frac{\psi}{110}\) billion in 2018. See Note 3(g) of the notes to our financial statements.

Employee Benefits

Our accounting for employee benefits, which mainly consists of our defined benefit plan, involves judgments about uncertain events including, but not limited to, discount rates, life expectancy and future pay inflation. The discount rates are determined by reference to the yield at the reporting date on high quality corporate bonds that have maturity dates approximating the terms of our benefits obligations and that are denominated in the same currency in which the benefits are expected to be paid. Due to changing market and economic conditions, the underlying key assumptions may differ from actual developments and may lead to significant changes in our defined benefit plan. We immediately recognize all actuarial gains and losses arising from defined benefit plans in retained earnings.

Recent Accounting Changes

For a discussion of new standards, interpretations and amendments to existing standards that have been published, see Note 3 of the notes to our financial statements.

IFRS No. 9 "Financial Instruments"

IFRS No. 9 "Financial Instruments" regulates requirements for measurement and recognition of financial assets, financial liabilities and certain contracts in relation to non-financial items. It replaces the existing guidance in IAS No. 39 "Financial Instruments: Recognition and Measurement." We initially applied IFRS No. 9 "Financial Instruments" for the year beginning on January 1, 2018.

The standard was applied retrospectively with some exemptions allowing an entity to avoid restating the comparative information for prior periods in relation to classification and measurement (including impairment) changes. We have applied such exemptions. While certain categories of our financial assets were reclassified in accordance with applicable categories under IFRS No. 9 with no changes to their carrying amounts, there was no effect resulting from the initial application of IFRS No. 9 on the balance of our retained earnings as of the date of such initial application.

IFRS No. 15 "Revenue from Contracts with Customers"

IFRS No. 15 "Revenue from Contracts with Customers" provides a comprehensive framework for determining the timing, measurement and recognition of revenue. It replaces existing revenue recognition guidance, including IAS No. 18 "Revenue," IAS No. 11 "Construction Contracts," SIC No. 31 "Revenue-Barter transactions involving advertising services," IFRIC No. 13 "Customer Loyalty Programs," IFRIC No. 15 "Agreements for the construction of real estate," and IFRIC No. 18 "Transfers of assets from customers." We initially applied IFRS No. 15 "Revenue from Contracts with Customers" for the year beginning on January 1, 2018 by recognizing the cumulative impact of applying the revenue standard as of January 1, 2018 on the opening balance of our retained earnings as of January 1, 2018, the period of initial application.

IFRS 15 requires us to recognize certain refund liabilities and the resulting rights to recover returned goods. As a result, our provisions, which constitute a part of our current liabilities, and other current assets, each increased by \text{\text{\$W}}10 billion as of January 1, 2018 and by \text{\text{\$W}}7 billion as of December 31, 2018. There was no impact on the opening balance of our retained earnings as of January 1, 2018. There was also no significant impact on our consolidated statements of comprehensive income and our cash flows for the year ended December 31, 2018.

IFRS No. 16 "Leases"

IFRS No. 16 "Leases," which provides a single, on-balance sheet lease accounting model for lessees, will replace IAS No. 17 "Leases", IFRIC No. 4 "Determining whether an Arrangement contains a Lease," SIC-15 "Operating Leases—Incentives" and SIC-27, "Evaluating the Substance of Transactions Involving the Legal Form of a Lease." It is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. As a lessee, we intend to adopt IFRS No. 16 from January 1, 2019, applying the modified retrospective approach, which will allow us to recognize the cumulative impact of applying IFRS No. 16 as an adjustment to the opening balance of our retained earnings as of January 1, 2019 with no comparative information for prior periods. We do not expect there to be a significant impact on our consolidated statements of financial position and comprehensive income as of and for the year ended December 31, 2019 from our adoption of IFRS No. 16.

Operating Results

The following presents our consolidated results of operation information and as a percentage of our revenue for the years indicated:

	Year ended December 31,						
	2016	%	2017	%	2018	2018(1)	%
	(in	billions of	Won and in m	illions of U	JS <mark>\$, except</mark> fo	r percentages)	
Revenue	₩ 26,504	100.0%	₩ 27,790	100.0%	₩ 24,337	US\$ 21,869	100.0%
Cost of sales	(22,754)	85.9	(22,425)	80.7	(21,251)	(19,096)	87.3
Gross profit	3,750	14.1	5,366	19.3	3,085	2,772	12.7
Selling expenses	(695)	2.6	(994)	3.6	(834)	(749)	3.4
Administrative expenses	(610)	2.3	(696)	2.5	(938)	(843)	3.9
Research and development expenses	(1,134)	4.3	(1,213)	4.4	(1,221)	(1,097)	5.0
Other income	1,592	6.0	1,082	3.9	1,004	902	4.1
Other expenses	(1,468)	5.5	(1,230)	4.4	(1,115)	(1,002)	4.6
Finance income	140	0.5	279	1.0	254	228	1.0
Finance costs	(266)	1.0	(269)	1.0	(327)	(294)	1.3
Equity income on investments, net	7	0.0	10	0.0	1	1	0.0
Profit (loss) before income tax	1,316	5.0	2,333	8.4	(91)	(82)	0.4
Income tax expense	(385)	1.5	(396)	1.4	(88)	(79)	0.4
Profit (loss) for the year	931	3.5	1,937	7.0	(179)	(161)	0.7

⁽¹⁾ For convenience, the Korean Won amounts are expressed in U.S. dollars at the rate of \(\frac{\pmathbf{W}}{1},112.85\) to US\$1.00, the noon buying rate in effect on December 31, 2018 as certified by the Federal Reserve Bank of New York for customs purposes. This translation should not be construed as a representation that the Korean Won amounts represent, have been or could be converted to U.S. dollars at that rate or any other rate.

Comparison of 2018 to 2017

Revenue

Our revenue decreased by 12.4% from \(\pm27,790\) billion in 2017 to \(\pm24,337\) billion (US\$21,869 million) in 2018. The decrease in revenue resulted from decreases in revenue derived from sales of panels for televisions, for mobile and other applications, for tablet computers and for desktop monitors, which were in turn mainly due to decreases in the average selling price of panels for televisions, for tablet computers and for desktop monitors and a decrease in the number of panels sold for mobile and other applications, offset in part by an increase in revenue derived from sales of panels for notebook computers.

Revenue attributable to sales of panels for televisions decreased by 17.0% from \text{\text{\$

Revenue attributable to sales of panels for notebook computers increased by 26.4% from \(\pi_2,244\) billion in 2017 to \(\pi_2,837\) billion (US\\$2,549\) million) in 2018, resulting from increases in both the number of units sold and average selling price of panels in this category in 2018 compared to 2017. The total unit sales of panels for notebook computers increased by 13.0% from 27.0 million panels in 2017 to 30.5 million panels in 2018, and the average selling price of panels in this category increased by 12.0% from \(\pi_83,114\) in 2017 to \(\pi_93,105\) (US\\$84\) in 2018. The increase in the sales volume of panels for notebook computers primarily reflected growth in demand for notebook computers with high performance features, including high resolution and AH-IPS. The increase in the average selling price of our notebook computer panels was mainly attributable to the continued increase in the proportion of panels with differentiated specialty features that command higher selling prices, such as high resolution and AH-IPS, in our product mix for panels for notebook computers.

Revenue attributable to sales of panels for desktop monitors decreased by 8.0% from \(\pmu4,393\) billion in 2017 to \(\pmu4,040\) billion (US\\$3,630\) million) in 2018, resulting from a decrease in the average selling price of panels in this category, accompanied by a small decrease in the number of units sold of panels in this category in 2018 compared to 2017. The average selling price of panels for desktop monitors decreased by 7.3% from \(\pmu118,730\) in 2017 to \(\pmu110,103\) (US\\$99) in 2018, and the total unit sales of panels in this category decreased slightly by 0.8% from 37.0 million panels in 2017 to 36.7 million panels in 2018. The decrease in the average selling price of desktop monitor panels was primarily attributable to downward pricing pressures in the TFT-LCD panel market. The slight decrease in the sales volume of panels for desktop monitors primarily resulted from our strategic decision to reduce the production of certain models with lower profitability.

Revenue attributable to sales of panels for tablet computers decreased by 16.0% from \(\pmu\)2,370 billion in 2017 to \(\pmu\)1,991 billion (US\$1,789 million) in 2018, resulting from a decrease in the average selling price of panels in this category as well as a decrease in the number of units sold of panels in this category in 2018 compared to 2017. The average selling price of panels for tablet computers decreased by 11.8% from \(\pmu\)90,269 in 2017 to \(\pmu\)79,592 (US\$72) in 2018, and the total unit sales of panels in this category decreased by 4.9% from 26.3 million panels in 2017 to 25.0 million panels in 2018. The decreases in the average selling price and the sales volume of tablet computer panels both mainly reflected the continued maturing of the consumer market and plateauing of demand for tablet computers in general.

Revenue attributable to sales of panels for mobile and other applications decreased by 18.8% from \$\fomalfootnothe{W}7,020\$ billion in 2017 to \$\fomalfootnothe{W}5,699\$ billion (US\$5,121 million) in 2018, resulting from a significant decrease in the number of units sold of panels in this category in 2018 compared to 2017, partially offset by an increase in the average selling price of panels in this category in 2018 compared to 2017. The total unit sales of panels in this category decreased significantly by 28.1% from 146.2 million in 2017 to 105.1 million in 2018, whereas the average selling price of panels in this category increased by 13.0% from \$\fomalfootnothe{W}48,029\$ in 2017 to \$\fomalfootnothe{W}54,203\$ (US\$49) in 2018. The decrease in the sales volume of panels for mobile and other applications primarily resulted from a decrease in demand for TFT-LCD products and our corresponding shift in strategy to focus on higher-end OLED products and more efficient manufacturing processes and reduce the production output of lower-end TFT-LCD products. The increase in the average selling price of panels in this category was attributable to the further increase in the proportion of panels with differentiated specialty features and larger panels, as well as an increase in the proportion of higher margin OLED panels for mobile and wearable devices, in our product mix for panels in this category.

In addition, our revenue attributable to royalty and others decreased by 4.4% from \text{W45} billion in 2017 to \text{W43} billion (US\$39 million) in 2018. The decrease was due to a decrease in royalties from \text{W20} billion in 2017 to \text{W18} billion (US\$16 million) in 2018, while other revenue, consisting primarily of sales of raw materials on-sold to our customers for module assembly purposes and sales of components to third party warranty service providers, remained relatively stable at \text{W25} billion (US\$23 million) in both 2017 and 2018.

Cost of Sales

Cost of sales decreased by 5.2% from \(\pi\)22,425 billion in 2017 to \(\pi\)21,251 billion (US\\$19,096 million) in 2018. The decrease in our cost of sales in 2018 compared to 2017 was attributable primarily to decreases in raw materials and component costs mainly related to selling fewer panel units overall in 2018 compared to 2017, partially offset by the increased share of high-end products in our product mix which contributed to the increase in costs on a per unit basis during the same period. In addition, change in inventories due in part to the weakening of the U.S. Dollar, in which 85.6% of our raw materials and component part purchases were denominated in 2018, against the Korean Won in 2018 as a whole, compared to 2017 as a whole, contributed to the decrease in cost of sales in 2018 compared to 2017.

As a percentage of our total cost of sales, raw materials and component costs and labor costs decreased from 64.6% and 10.9%, respectively, in 2017 to 62.9% and 10.7%, respectively, in 2018, while overhead costs and depreciation and amortization costs increased from 12.1% and 13.7%, respectively, in 2017 to 13.6% and 14.2%, respectively, in 2018.

As a percentage of revenue, cost of sales increased from 80.7% in 2017 to 87.3% in 2018, as the proportion of our cost of sales accounted for by fixed costs such as depreciation and overhead, increased while our sales volume and revenue decreased.

Cost of sales per square meter of net display area, which is derived by dividing total cost of sales by total square meters of net display area shipped, decreased by 6.5% from \wspace 538,806 in 2017 to \wspace 503,691 (US\$453) in 2018. Cost of sales per panel sold, which is derived by dividing total cost of sales by total number of panels sold, increased by 9.7% from \wspace 77,723 in 2017 to \wspace 85,247 (US\$77) in 2018 due in part to increases in the proportion within each of our product categories of panel units with differentiated specialty features and newer technologies, such as OLED panels, which generally have higher cost of sales per panel relative to other panel units within each product category, sold in our product mix during the same period.

Gross Profit and Gross Margin

As a result of the cumulative effect of the reasons explained above, our gross profit decreased by 42.5% from \(\pi_5,366\) billion in 2017 to \(\pi_3,085\) billion (US\\$2,772\) million) in 2018, and our gross margin decreased from 19.3% in 2017 to 12.7% in 2018. The continued shift in our product mix toward higher-end products in 2018 resulted in increases in both the average selling price and cost of sales per panel sold in 2018 compared to 2017, but the increase in cost of sales per panel sold outpaced the increase in average selling price mainly due to an increase in the production capacity of the industry that applied downward pricing pressure.

Selling and Administrative Expenses

Selling and administrative expenses increased by 4.8% from \(\Psi\)1,691 billion in 2017 to \(\Psi\)1,772 billion (US\\$1,591 million) in 2018. As a percentage of revenue, our selling and administrative expenses increased from 6.1% in 2017 to 7.3% in 2018. The increase in selling and administrative expenses in 2018 compared to 2017 was attributable primarily to increases in:

- salaries, which resulted mainly from a one-time retirement allowance incurred in connection with our voluntary retirement program implemented in 2018 in order to optimize our workforce; and
- depreciation expenses, which was primarily due to the recognition in 2018 of depreciation expenses relating to certain of our idle manufacturing facilities that previously constituted part of our cost of sales as part of our selling and administrative expenses, as well as increases in our other non-manufacturing property, plant and equipment.

The effects of such increases were partially offset by a significant decrease in our advertising expenses, as the level of our marketing activities were generally reduced in 2018 compared to 2017, as we had engaged in enhanced marketing activities to promote our OLED display panels in 2017.

The following are the major components of our selling and administrative expenses for each of the years in the two-year period ended December 31, 2018:

	Ye	er 31,				
	2	017	2	2018		
	(in billions of V					
Salaries	₩	327	₩	501		
Expenses related to defined benefit plan		27		31		
Other employee benefits		95		90		
Shipping costs		215		200		
Fees and commissions		197		221		
Depreciation		139		175		
Taxes and dues		46		66		
Advertising		236		112		
Warranty expenses		251		235		
Rent		27		27		
Insurance		12		12		
Travel		28		25		
Training		16		13		
Others		73		64		
Total	₩	1,691	₩	1,772		

Research and Development Expenses

Research and development expenses increased slightly by 0.7% from \$1,213 billion in 2017 to \$1,221 billion (US\$1,097 million) in 2018. As a percentage of revenue, our research and development expenses increased from 4.4% in 2017 to 5.0% in 2018. The increase in research and development expenses in 2018 compared to 2017 was attributable to increases in research and development activities related to OLED and next generation technologies and products and in the average number of research and development employees over the same period.

Other Income (Expense), Net

Other income includes primarily foreign currency gains from operating activities, and other expenses include primarily foreign currency losses from operating activities and impairment loss on property, plant and equipment. Our total net other expense decreased by 24.8% from \text{W}149 billion in 2017 to \text{W}112 billion (US\$101 million) in 2018. Such decrease was primarily due to a significant decrease in net foreign currency loss from \text{W}220 billion in 2017 to \text{W}60 billion (US\$54 million) in 2018, reflecting the strengthening of the U.S. Dollar against the Korean Won in 2018 compared to the weakening of the same in 2017, offset in part by a net loss on disposal of property, plant and equipment of \text{W}8 billion (US\$7 million) in 2018 compared to a net gain on disposal of property, plant and equipment of \text{W}81 billion in 2017, which was due mainly to the effects of the one-time gain we recognized from the sale of equipment following the closure of our P4 manufacturing facility in 2017, compared to no such significant disposal of property, plant and equipment in 2018.

Finance Income (Costs), Net

Finance income recognized in profit or loss includes primarily interest income and foreign currency gains. Finance cost recognized in profit or loss includes primarily interest expense and foreign currency loss. We recorded total net finance cost of W73 billion (US\$66 million) in 2018 compared to total net finance income of W10 billion in 2017.

Our finance income decreased by 9.0% from \text{\$\text{\$\text{\$W279}\$}} billion in 2017 to \text{\$\text{\$\text{\$\text{\$\text{\$W254}\$}}} billion (US\$228 million) in 2018, attributable primarily to a decrease in foreign currency gain by 23.7% from \text{\$\text{\$\text{\$\text{\$W211}\$}}} billion in 2017 to \text{\$\text{\$\text{\$\text{\$\text{\$W161}\$}}} billion (US\$145 million) in 2018, which was partially offset by an increase in interest income by 15.0% from \text{\$\text{\$\text{\$\text{\$W60\$}}}\$} billion (US\$62 million) in 2018. The decrease in foreign currency gain in 2018 compared to 2017 was due to a decrease in the range of fluctuation in value of the Korean Won relative to the U.S. dollar over the same period. The increase in interest income resulted primarily from an increase in our average amounts of interest-earning financial assets outstanding as well as the applicable interest rates on such financial assets in 2018 compared to 2017.

Our finance costs increased by 21.6% from \text{\$\}\$\$}\$}\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\t

Income Tax Expense

Our income tax expense decreased by 77.8% from \text{W396} billion in 2017 to \text{W88} billion (US\$79 million) in 2018, primarily due to our recording of a loss before income tax of \text{W91} billion (US\$82 million) in 2018 compared to a profit before income tax of \text{W2,333} billion in 2017. Our income tax expense using the statutory tax rate of each country in which we pay income tax decreased by 94.5% from \text{W666} billion in 2017 to \text{W31} billion (US\$28 million) in 2018. Our actual income tax expense was reduced by tax credits of \text{W248} billion in 2017 and \text{W107} billion (US\$96 million) in 2018. Our effective tax rate was not calculated in 2018 due to the loss before income tax we recorded in such year, whereas our effective tax rate was 17.0% in 2017. See Note 23 of the notes to our financial statements.

Profit (loss) for the Year

As a result of the cumulative effect of the reasons explained above, we recorded a profit for the year of \$41,937 billion in 2017 but recorded a loss for the year of \$4179 billion (US\$161 million) in 2018. Our profit for the year as a percentage of revenue was 7.0% in 2017 and our loss for the year as a percentage of revenue was (0.7)% in 2018.

Comparison of 2017 to 2016

Revenue

Our revenue increased by 4.9% from \(\pi\)26,504 billion in 2016 to \(\pi\)27,790 billion in 2017. The increase in revenue resulted from increases in revenue derived from sales of panels for televisions and for desktop monitors, which were in turn due to an increase in their average selling prices, offset in part by a decrease in revenue derived from sales of panels for notebook computers, tablet computers and mobile and other applications.

Revenue attributable to sales of panels for televisions increased by 15.6% from approximately \$\pmu 10,133\$ billion in 2016 to approximately \$\pmu 11,718\$ billion in 2017, resulting from an increase in the average selling price of panels in this category in 2017 compared to 2016, partially offset by a small decrease in the number of units sold in this category during the same period. The average selling price of panels for televisions increased by 17.4% from approximately \$\pmu 191,492\$ in 2016 to approximately \$\pmu 224,879\$ in 2017, whereas the total unit sales of panels in this category decreased by 1.5% from approximately 52.9 million panels in 2016 to approximately 52.1 million panels in 2017. The increase in the average selling price of television panels was mainly due to a shift in our product mix toward larger television panels that are equipped with newer technologies, such as OLED and Ultra HD, which tend to command a higher price premium. The decrease in the number of television panels sold reflected a decrease in the sales volume of our television panels that are less than 42 inches in size. Notwithstanding the overall decrease in sales volume of our television panels incorporating differentiated specialty features, highlighting a general migration in demand from our small-sized to large-sized television panels.

Revenue attributable to sales of panels for notebook computers decreased by 5.9% from approximately \(\frac{\psi}{2}\),384 billion in 2016 to approximately \(\frac{\psi}{2}\),244 billion in 2017, resulting from a decrease in the number of units sold in this category in 2017 compared to 2016, partially offset by an increase in the average selling price of panels in this category in 2017 compared to 2016. The total unit sales of panels for notebook computers decreased by 32.0% from approximately 39.7 million panels in 2016 to approximately 27.0 million panels in 2017, whereas the average selling price of panels in this category increased by 38.3% from approximately \(\frac{\psi}{\psi}\)60,093 in 2016 to approximately \(\frac{\psi}{\psi}\)83,114 in 2017. The decrease in revenue attributable to sales of panels for notebook computers primarily reflected a decline in consumer demand for notebook computers, which in turn resulted in a similar decline in market demand for panels for notebook computers. The effect of such decrease was partially offset by the increase in the average selling price of panels in this category, which was attributable to the continued increase in the proportion of panels with differentiated specialty features that command higher selling prices, such as touch screen and AH-IPS, in our product mix for panels for notebook computers.

Revenue attributable to sales of panels for desktop monitors increased by 8.9% from approximately \(\formalfontarrow{44,393}\) billion in 2017, resulting from an increase in the average selling price of panels in this category in 2017 compared to 2016, partially offset by a decrease in the number of units sold in this category in 2017 compared to 2016. The average selling price of panels for desktop monitors increased by 17.7% from approximately \(\formalfontarrow{W100,872}\) in 2016 to approximately \(\formalfontarrow{W118,730}\) in 2017, whereas the total unit sales of panels for desktop monitors decreased by 7.5% from approximately 40.0 million panels in 2016 to approximately 37.0 million panels in 2017. The increase in the average selling price of our desktop monitor panels primarily resulted from an increase in the proportion of larger panels with differentiated specialty features, such as ultra-slim bezel borderless designs and Full HD resolution, that command higher selling prices in our product mix for desktop panels. The effect of such increase was partially offset by the decrease in sales volume of desktop panels mainly due to the continued decrease in demand for desktop monitors generally in light of increased competition among other consumer computer screen.

Revenue attributable to sales of panels for tablet computers decreased by 12.1% from approximately \(\pmu_2\),696 billion in 2017 to approximately \(\pmu_2\),370 billion in 2017, resulting from a decrease in the average selling price of panels in this category in 2017 compared to 2016, partially offset by an increase in the number of units sold of panels in this category in 2017 compared to 2016. The average selling price of panels for tablet computers decreased by 16.4% from approximately \(\pmu_108\),026 in 2016 to approximately \(\pmu_2016\) in 2017, whereas the total unit sales of panels in this category increased by 5.2% from approximately 25.0 million panels in 2016 to approximately 26.3 million panels in 2017. The decrease in the average selling price of panels in this category was mainly due to increased downward pricing pressure resulting from capacity expansion and increased competition by our competitors coupled with inventory adjustments by our customers, particularly in respect of panels smaller than 10 inches. The increase in the sales volume of panels for tablet computers was attributable to a significant increase in the sales volume of 10-inch or larger panels from 0.1 million panels in 2016 to 3.6 million panels in 2017, which in turn was primarily due to an increase in consumer demand for, and the introduction of new models of, larger tablet computers in the market.

Revenue attributable to sales of panels for mobile and other applications decreased by 2.7% from approximately \$\foward 7,216\$ billion in 2016 to approximately \$\foward 7,020\$ billion in 2017, resulting from a decrease in the number of units sold in this category in 2017 compared to 2016, partially offset by an increase in the average selling price of panels in this category in 2017 compared to 2016. The total unit sales of panels for mobile and other applications decreased by 15.6% from approximately 173.2 million in 2016 to 146.2 million in 2017, whereas the average selling price of panels in this category increased by 15.3% from approximately \$\foward 48,029\$ in 2017. The decrease in the sales volume of panels for mobile and other applications primarily resulted from our shift in strategy to focus on higher-end products and more efficient manufacturing processes and reduce the production output of lower-end products. The increase in the average selling price of panels in this category was attributable to the further increase in the proportion of panels with differentiated specialty features and larger panels in our product mix for panels in this category.

In addition, our revenue attributable to royalty and others increased by 12.5% from approximately \text{\text{\$\psi}}40 billion in 2016 to approximately \text{\$\psi}45 billion in 2017. The increase was due to an increase in royalties from \text{\$\psi}17 billion in 2016 to \text{\$\psi}20 billion in 2017, as well as an increase in other revenue, consisting primarily of sales of raw materials on-sold to our customers for module assembly purposes and sales of components to third party warranty service providers, from \text{\$\psi}23\$ billion in 2016 to \text{\$\psi}25\$ billion in 2017.

Cost of Sales

Cost of sales decreased by 1.4% from \(\fomaller{W}\)22,754 billion in 2016 to \(\fomaller{W}\)22,425 billion in 2017. The decrease in our cost of sales in 2017 compared to 2016 was attributable primarily to decreases in raw materials and component costs mainly related to selling fewer panel units overall in 2017 compared to 2016, partially offset by the increased share of high-end products in our product mix which contributed to the increase in costs on a per unit basis during the same period. In addition, change in inventories due in part to the weakening of the U.S. Dollar, in which 85.6% of our raw materials and component part purchases were denominated in 2017, against the Korean Won in 2017 compared to 2016 contributed to the decrease in cost of sales in 2017 compared to 2016.

As a percentage of our total cost of sales, raw materials and component costs decreased from 66.4% in 2016 to 64.6% in 2017, while labor costs, overhead costs and depreciation and amortization costs increased from 10.1%, 11.3% and 12.5%, respectively, in 2016 to 10.9%, 12.1% and 13.7%, respectively, in 2017.

As a percentage of revenue, cost of sales decreased from 85.9% in 2016 to 80.7% in 2017. The decrease in our cost of sales as a percentage of revenue in 2017 compared to 2016 was attributable mainly to the continued increase in the proportion of high margin products with differentiated specialty features, which tend to command higher premiums, in our product mix during the same period.

Cost of sales per square meter of net display area, which is derived by dividing total cost of sales by total square meters of net display area shipped, decreased by 2.7% from \\ \psi 553,935 in 2016 to \\ \psi 538,806 in 2017. Cost of sales per panel sold, which is derived by dividing total cost of sales by total number of panels sold, increased by 13.0% from \\ \psi 68,803 in 2016 to \\ \psi 77,723 in 2017 due in part to increases in the proportion within each of our product categories of larger panel units with differentiated specialty features, which generally have higher cost of sales per panel relative to other panel units within each product category, sold in our product mix during the same period.

Gross Profit and Gross Margin

As a result of the cumulative effect of the reasons explained above, our gross profit increased by 43.1% from \(\pm3\),750 billion in 2016 to \(\pm3\),366 billion in 2017, and our gross margin increased from 14.1% in 2016 to 19.3% in 2017. The continued shift in our product mix toward higher-end products in 2017 resulted in increases in both the average selling price and cost of sales per panel sold in 2017 compared to 2016, but the increase in the average selling price per panel sold outpaced the increase in cost of sales per panel sold, because the higher-end products in our product mix tend to command higher premiums. We were able to partially offset the increase in per unit costs by continuing to improve the efficiency of our production processes.

Selling and Administrative Expenses

Selling and administrative expenses increased by 29.6% from \$4,305 billion in 2016 to \$4,691 billion in 2017. As a percentage of revenue, our selling and administrative expenses increased from 4.9% in 2016 to 6.1% in 2017. The increase in selling and administrative expenses in 2017 compared to 2016 was attributable primarily to increases in:

- advertising expenses, resulting from an increase in our marketing activities in 2017, primarily in North America, in an effort to further expand the market for OLED panels; and
- warranty expenses, resulting from higher quality expectations for panel products.

The following are the major components of our selling and administrative expenses for each of the years in the two-year period ended December 31, 2017:

	Year ended December 3			r 31,
	20	16	201	
		(in billions of Wo		
Salaries	₩	277	₩	327
Expenses related to defined benefit plan		29		27
Other employee benefits		90		95
Shipping costs		191		215
Fees and commissions		193		197
Depreciation		129		139
Taxes and dues		31		46
Advertising		68		236
Warranty expenses		167		251
Rent		26		27
Insurance		12		12
Travel		23		28
Training		14		16
Others		56		73
Total	W	1,305	W	1,691

Research and Development Expenses

Research and development expenses increased by 7.0% from \(\pi\)1,134 billion in 2016 to \(\pi\)1,213 billion in 2017. As a percentage of revenue, our research and development expenses increased slightly from 4.3% in 2016 to 4.4% in 2017. The increase in research and development expenses in 2017 compared to 2016 was attributable to increases in research and development activities related to OLED and next generation technologies and products and in the average number of research and development employees over the same period.

Other Income (Expense), Net

Other income includes primarily foreign currency gains from operating activities and gain on disposal of property, plant and equipment, and other expenses include primarily foreign currency losses from operating activities and loss on disposal of property, plant and equipment. In 2017, we recorded total net other expense of \text{\text{\text{W}}149} billion compared to total net other income of \text{\text{\text{W}}124} billion in 2016. The change was primarily due to a net foreign currency gain of \text{\text{\text{\text{W}}123}} billion in 2016 compared to a net foreign currency loss of \text{\text{\text{\text{W}}220}} billion in 2017, reflecting the weakening of the U.S. Dollar against the Korean Won in 2017 compared to 2016, offset in part by a more than ten-fold increase in net gain on disposal of property, plant and equipment from \text{\text{\text{\text{W}}7}} billion in 2016 to \text{\text{\text{\text{\text{W}}81}} billion in 2017, which was due mainly to the gain we recognized from the sale of equipment following the closure of our P4 manufacturing facility. See Note 21 of the notes to our financial statements.

Finance Income (Costs), Net

Finance income recognized in profit or loss includes primarily interest income and foreign currency gains. Finance cost recognized in profit or loss includes primarily interest expense and foreign currency loss. We recorded total net finance income of W10 billion in 2017 compared to total net finance cost of W127 billion in 2016.

Our finance income increased by 99.3% from \text{\$\text{W}\$140 billion in 2016 to \$\text{\$\text{W}}\$279 billion in 2017, attributable primarily to an increase in foreign currency gain by 157.3% from \text{\$\text{\$\text{W}}\$82 billion in 2016 to \$\text{\$\text{\$\text{W}}\$211 billion in 2017 and an increase in interest income by 42.9% from \text{\$\text{\$\text{\$\text{\$W}\$}\$42 billion in 2016 to \$\text{\$\text{\$\text{\$\text{\$W}\$}\$60 billion in 2017. The increase in foreign currency gain in 2017 compared to 2016 was due to an increase in the range of fluctuation in value of the Korean Won relative to the U.S. dollar over the same period. The increase in interest income resulted primarily from an increase in our average amounts of interest-earning financial assets outstanding as well as the applicable interest rates on such financial assets in 2017 compared to 2016.

Our finance costs increased slightly by 1.1% from \text{\$\}\$\text{\$\text{\$\}\$\$}\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$

Income Tax Expense

Our income tax expense increased by 2.9% from \(\pi\)385 billion in 2016 to \(\pi\)396 billion in 2017, primarily due to a 77.3% increase in profit before income tax from \(\pi\)1,316 billion in 2016 to \(\pi\)2,333 billion in 2017. Our effective tax rate decreased from 29.2% in 2016 to 17.0% in 2017 primarily due to a decrease in unrecognized deferred tax assets (which accounted for a 6.0% point decrease in effective tax rate as compared to 2016), which reflected changes in estimates of our future taxable income, and a decrease in effective tax rate as compared to 2016), which was primarily attributable to a decrease in the proportion of profit before income tax from our consolidated subsidiaries in the United States, Japan and Germany, which have relatively high statutory income tax rates. In addition, a change in the applicable tax rate used in estimating our deferred tax expense accounted for a 3.1% point decrease in effective tax rate as compared to 2016. See Note 23 of the notes to our financial statements.

Profit for the Year

As a result of the cumulative effect of the reasons explained above, our profit for the year increased significantly by 107.8% from \$4931 billion in 2016 to \$41,937 billion in 2017.

Item 5.B. Liquidity and Capital Resources

Our principal sources of liquidity have been net cash flows generated from our operating activities and debt financing activities. We had cash and cash equivalents of \$\pmu1,559\$ billion, \$\pmu2,603\$ billion and \$\pmu2,365\$ billion (US\$2,125 million) as of December 31, 2016, 2017 and 2018, respectively. We also had short-term deposits in banks of \$\pmu1,164\$ billion, \$\pmu758\$ billion and \$\pmu78\$ billion (US\$70 million), respectively, as of December 31, 2016, 2017 and 2018. Our primary use of cash has been to fund capital expenditures related to the expansion and improvement of our production capacity with respect to existing and newly developed products, including the construction and ramping-up of new, or in certain cases, expansion or conversion of existing, fabrication facilities and production lines and the acquisition of new equipment. We also use cash flows from operations for our working capital requirements and servicing our debt payments. We expect our cash requirements for 2019 to be primarily for capital expenditures and repayment of maturing debt.

As of December 31, 2016, we had current assets of ₩10,484 billion and current liabilities of ₩7,058 billion, resulting in working capital of ₩3,426 billion. As of December 31, 2017, we had current assets of ₩10,474 billion and current liabilities of ₩8,979 billion, resulting in working capital of ₩1,495 billion. As of December 31, 2018, we had current assets of ₩8,800 billion (US\$7,908 million) and current liabilities of ₩9,954 billion (US\$8,945 million), resulting in a working capital deficit of ₩1,154 billion (US\$1,037 million). The decrease in working capital as of December 31, 2017 compared to December 31, 2016 was primarily attributable to a ₩785 billion increase in current financial liabilities mainly due to the increase in our current portion of long-term debt outstanding as of December 31, 2017 compared to December 31, 2016, as well as a ₩720 billion increase in other accounts payable mainly as a result of construction costs incurred in connection with our ongoing investments in a next generation large-size OLED production line and a next generation plastic OLED production line in Paju, Korea. The working capital deficit as of December 31, 2018, compared to a working capital surplus as of December 31, 2017, was primarily attributable to a ₩1,496 billion decrease in net trade accounts and notes receivable, which was mainly caused by decreases in our revenue and sales of trade accounts and notes receivable in 2018, as well as a ₩680 billion decrease in our deposits in banks mainly as a result of payments we received in 2018 pursuant to long-term supply agreements entered into with certain of our customers.

Our management constantly monitors our working capital, and we have historically been able to satisfy our cash requirements from cash flows from operations and debt financing. Although we had a working capital deficit as of December 31, 2018, we believe that we have sufficient sources of working capital, including in the form of debt, for our present requirements. In 2018, we issued domestic debentures in the aggregate principal amount of \wodesharpoonup 500 billion (US\$449 million) and foreign currency denominated bonds in the aggregate principal amount of US\$300 million (\wodesharpoonup 334 billion), and we entered into a number of facility loan agreements, from which we have drawn down the full aggregate principal amount of \wodesharpoonup 1,950 billion (US\$1,752 million), US\$1,185 million (\wodesharpoonup 139 billion) and RMB3,900 million (\wodesharpoonup 635 billion) as of December 31, 2018 in long-term loans, primarily to fund our capital expenditures and refinance our existing borrowings maturing in 2019. We have pledged property, plant and equipment and other assets in the amount of RMB899 million (\wodesharpoonup 146 billion) as security in connection with our facility loan agreements.

Our ability to satisfy our cash requirements from cash flows from operations and financing activities will be affected by our ability to maintain and improve our margins and, in the case of external financing, market conditions, which in turn may be affected by several factors outside of our control. Therefore, we re-evaluate our capital requirements regularly in light of our cash flows from operations, the progress of our expansion plans and market conditions. To the extent that we do not generate sufficient cash flows from our operations to meet our capital requirements, we may rely on other financing activities, such as external borrowings and securities offerings, including the issuance of equity, equity-linked and other debt securities.

Our net cash provided by operating activities amounted to \(\pi3,641\) billion in 2016, \(\pi6,764\) billion in 2017 and \(\pi4,484\) billion (US\$4,029\) million) in 2018. The increase in net cash provided by operating activities in 2017 compared to 2016 was mainly due to (i) an increase in cash collected from our customers as a result of an increase in our sales in 2017 compared to 2016, (ii) an increase in cash inflow from trade accounts and notes receivable primarily resulting from the effects of the timing of trade accounts receivable collections prior to the year-end and appreciation of the Korean Won against the U.S. dollar at the end of 2017 compared to the end of 2016, and (iii) long-term advances received in 2017 pursuant to long-term supply agreements compared to no such advances received in 2016. The decrease in net cash provided by operating activities in 2018 compared to 2017 was mainly due to (i) a decrease in cash collected from our customers, primarily as a result of a decrease in our sales revenue, (ii) an increase in other current assets, mainly due to an increase in value added taxes refundable and (iii) an increase in inventory mainly due to an increase in the proportion of more expensive, higher value-added products in our inventory, in each case in 2018 compared to 2017. The decrease in net cash provided by our operating activities in 2018 compared to 2017 was offset in part by our sales of certain of our trade accounts and notes receivable to financial institutions in 2018 compared to no such sales in 2017.

The cyclical market conditions that are characteristic of our industry, as well as the regular ramp-up of our new fabrication facilities and production lines and our cost reduction measures, contribute to the fluctuations in our inventory levels from period to period. In 2017, our inventory levels increased by 2.8% from year-end 2016. In 2018, our inventory levels further increased by 14.5% from year-end 2017.

Inventories consisted of the following for the dates indicated:

		As of December 31,				
	2016	2016 2017 20				
	(iı	(in billions of Won and millions of US\$)				
Finished goods	₩ 931	₩ 966	₩1,084	US\$ 974		
Work in process	686	749	856	769		
Raw materials	355	345	555	499		
Supplies	316	291	196	176		
Total	W 2,288	W 2,351	₩2,691	US\$2,418		

⁽¹⁾ For convenience, the Korean Won amounts are expressed in U.S. dollars at the rate of \(\frac{\psi}{1}\),112.85 to US\$1.00, the noon buying rate in effect on December 31, 2018 as certified by the Federal Reserve Bank of New York for customs purposes. This translation should not be construed as a representation that the Korean Won amounts represent, have been or could be converted to U.S. dollars at that rate or any other rate.

Our net cash used in investing activities amounted to \(\psi_3,189\) billion in 2016, \(\psi_6,481\) billion in 2017 and \(\psi_7,675\) billion (US\\$6,897\) million) in 2018. Net cash used in investing activities primarily reflected the substantial capital expenditures we have made in connection with the expansion and improvement of our production capacity in recent years, mainly relating to construction of our new, or in certain cases, expansion or conversion of existing, fabrication and module assembly facilities and acquisition of new equipment. These cash outflows from capital expenditures amounted to \(\psi_3,736\) billion, \(\psi_6,592\) billion and \(\psi_7,942\) billion (US\\$7,137\) million) in 2016, 2017 and 2018, respectively. We intend to fund our capital requirements associated with our expansion and construction projects with cash flows from operations and financing activities, such as external long-term borrowings and bond issuances.

We currently expect that, in 2019, our total capital expenditures on a cash out basis will be at a similar level to 2018, primarily to fund our previously announced investments related to facilities for OLED panels. However, our overall expenditure levels and our allocation among projects are subject to many uncertainties. We review the amount of our capital expenditures and may make adjustments from time to time based on cash flows from operations, the progress of our expansion plans and market conditions.

Our net cash provided by financing activities amounted to \(\foadsigned{W}\)308 billion in 2016, \(\foadsigned{W}\)862 billion in 2017 and \(\foadsigned{W}\)2,953 billion (US\\$2,654 million) in 2018. The net cash provided by financing activities in 2016 reflects primarily the increase in long-term borrowings compared to 2015. The net cash provided by financing activities in 2017 reflects primarily the net proceeds from long-term borrowings as well as a decrease in repayment of current portion of long-term borrowings and bonds compared to 2016. The net cash provided by financing activities in 2018 reflects primarily an increase in net proceeds from long-term borrowings and debentures compared to 2017, partially offset by an increase in our repayment of current portion of long-term borrowings and bonds compared to 2017.

At our annual general meeting of shareholders held on March 11, 2016, we declared a cash dividend of \(\pi\)179 billion to our shareholders of record as of December 31, 2015 and distributed the cash dividend to such shareholders on April 8, 2016. On March 23, 2017, we declared a cash dividend of \(\pi\)179 billion to our shareholders of record as of December 31, 2016 and distributed the cash dividend to such shareholders on April 13, 2017. On March 15, 2018, we declared a cash dividend of \(\pi\)179 billion to our shareholders of record as of December 31, 2017 and distributed the cash dividend to such shareholders on April 12, 2018. At our shareholders meeting on March 15, 2019, we did not declare any cash dividend to our shareholders.

We had a total of \(\prec{\psi}\)113 billion, nil and nil of short-term borrowings outstanding as of December 31, 2016, 2017 and 2018, respectively. For further information regarding our financial liabilities, please see Note 11 of the notes to our financial statements.

As of December 31, 2018, we maintained accounts receivable sales negotiating facilities with several banks for up to an aggregate amount of US\$1,670 million at the parent company level in connection with our export sales transaction with our subsidiaries. In addition, we and our subsidiaries have also entered into various other accounts receivable sales negotiating facilities in Korean Won and foreign currencies for up to aggregate amounts of \text{\text{\$\text{W}}}220 billion and US\$2,481 million, respectively. For further information regarding these facilities, please see Note 14 of the notes to our financial statements.

As of December 31, 2018, we had outstanding long-term debt including current portion in the amount of \(\pm\)8,572 billion (US\$7,703 million), consisting of \(\pm\)2,010 billion of Korean Won denominated debentures, US\$300 million of U.S. dollar denominated debentures, US\$2,262 million of U.S. dollar denominated long-term loans, RMB5,198 million of RMB denominated long-term loans and \(\pm\)2,851 billion of Korean Won denominated long-term loans.

The terms of some of our long-term debt contain provisions that would trigger a requirement for early payment. The principal and interest under these obligations may be accelerated if there is a default, including defaults triggered by failure to comply with financial covenants and cross defaults triggered under our other debt obligations. We believe we were in compliance with the covenants under our debt obligations at December 31, 2018. For further information about our short- and long-term debt obligations as of December 31, 2018, see Note 11 of the notes to our financial statements.

As of December 31, 2018, we have entered into six agreements to guarantee the payment obligations in the aggregate amount of US\$1.2 billion of our subsidiary LG Display Vietnam Haiphong Co., Ltd. ("LGD Vietnam") under credit facilities with various financial institutions, including BNP Paribas, Sumitomo Mitsui Banking Corporation, Standard Chartered Bank, Citibank and Export-Import Bank of Korea, among other lenders.

Set forth below are the aggregate amounts, as of December 31, 2018, of our future contractual financing and licensing obligations under our existing debt and other contractual arrangements:

	Payments Due by Period					
Contractual Obligations	Total	Less than 1 year	1-3 years	3-5 years		e than ears
		(i	in billions of W	on)		
Long-Term Debt, including current portion	₩8,572	₩1,554	₩3,659	+2,743	W	616
Fixed License Payment	91	29	62			
Long-Term Other Payables	5	2	3	_		_
Total	₩8,668	W 1,585	₩3,724	₩2,743	W	616
Estimates of interest payment based on contractual interest rates						
effective as of December 31, 2018	₩ 822	₩ 257	₩ 394	₩ 124	W	47

In addition to fixed license payments listed above that we are obligated to make under certain technology license agreements, we also have continuing obligations to make cash royalty payments under our technology license agreements, the amount of which are generally determined based on a percentage of sales of our display products.

Expenses relating to our license fees and royalty payments under existing license agreements were \(\pi\)94 billion in 2016, \(\pi\)107 billion in 2017 and \(\pi\)117 billion (US\$105 million) in 2018, representing 6.6% of our research and development related expenditures in 2016, 5.6% in 2017 and 5.7% in 2018. We expect to make additional license fee payments as we enter into new technology license agreements from time to time with third parties.

Taxation

In 2018, the statutory corporate income tax rate applicable to us was 11.0% (including local income surtax) for the first \$\fomallocal{W}\$200 million of our taxable income, 22.0% (including local income surtax) for our taxable income between \$\fomallocal{W}\$200 million and \$\fomallocal{W}\$200 billion, 24.2% (including local income surtax) for our taxable income between \$\fomallocal{W}\$200 billion, and 27.5% (including local income surtax) for our taxable income in excess of \$\fomallocal{W}\$300 billion.

Tax Credits

We are entitled to a number of tax credits relating to certain investments in technology and human resources development. For example, under the Special Tax Treatment Control Law, we are entitled to a tax credit of up to 4% for our capital investments made outside certain areas of Seoul on or before December 31, 2018, provided that the number of our employees does not decrease compared to the previous year.

Tax credits not utilized in the fiscal year during which the relevant investment was made may be carried forward over the next five years in the case of capital investments and five years in the case of investments relating to technology and human resources development. As of December 31, 2018, we had recognized deferred tax assets related to these credits of \(\mathbb{W}\)308 billion (US\\$277 million), which may be utilized against future income tax liabilities through 2023. In addition, we also had unused tax credit carryforwards of \(\mathbb{W}\)180 billion (US\\$162 million) as of December 31, 2018 for which no deferred tax asset was recognized.

Item 5.C. Research and Development, Patents and Licenses, etc.

Research and Development

The display panel industry is subject to rapid technological changes. We believe that effective research and development is essential to maintaining our position as one of the industry's leading technology innovators.

To meet the demands of the future trends, we have formulated a long-term research and development strategy aimed at enhancing the process, device and design aspects of the existing products and diversifying the use of display panels as new opportunities arise with the development of communication systems and information technology. The following are examples of products and technologies that have been developed through our research and development activities in recent years:

- In 2016, we developed a Wallpaper 65-inch OLED television panel with a thickness of 2.57mm. In addition, we unveiled a 65-inch Crystal Sound Ultra HD OLED television panel with speakers integrated into the display, and we developed a 65-inch ultra-slim OLED television panel that applies HDR technology to achieve 800 nit peak luminance and improved display quality. We also developed a 55-inch Full HD transparent OLED television panel, with a transparency level of 40%. In the case of TFT-LCD panels, we introduced an 86-inch ultra-stretch format LCD television panel with a 58:9 screen aspect ratio. With respect to monitors, we successfully introduced an in-TOUCH monitor panel as well as a 21:9 screen aspect ratio IPS curved monitor utilizing Ultra Wide Quad HD technology. With respect to smartphones, we introduced our "Always-On Display" technology which enables the display of 24-hour information such as date, day, time, and battery status even when the screen is off, and reduces unnecessary power waste. We also unveiled a 12.3-inch transparent OLED display and 6.13-inch mirror display for Glass OLED.
- In 2017, we unveiled a 77-inch flexible and transparent Ultra HD OLED display panel with a transparency level of 40% and a radius curvature of 80mm. In addition, we introduced an 88-inch ultra-stretch TFT-LCD panel for commercial use. For monitors, we produced a 31.5 inch TFT-LCD panel with "8K" resolution. With respect to smartphones, we released a 5.7-inch Quad HD-plus full vision TFT-LCD display and a 6-inch Quad HD plastic OLED panel for smartphone products. With respect to automotive displays, we successfully developed and commenced production of in-TOUCH TFT-LCD panels.
- In 2018, we developed and introduced a 65-inch rollable OLED TV and ultra-large 88-inch 8K OLED TV. For TFT-LCD monitors, we introduced a four-sided borderless curved monitor with a 1900R curvature radius. With respect to TFT-LCD smartphones, we developed our first 5.8-inch Ultra HD Mobile product by applying WRGB sub-pixel structure to achieve high luminance, low power consumption and HDR support. We also developed a full-screen TFT-LCD panel for smartphones with a camera notch concept. In addition, we released a TFT-LCD video-wall product with very thin bezels. For automotive displays, we introduced a 12.3-inch FHD glassless 3D TFT-LCD product.

As the product life cycle of display panels using certain of the existing TFT-LCD technology is approaching maturity, we plan to further focus on OLED and other newer display technologies, while also exploring new growth opportunities in the application of display panels, such as in smartphones, public displays and automotive displays.

In order to maintain our position as one of the industry's technology leaders, we believe it is important not only to increase direct spending on research and development, but also to manage our research and development capability effectively in order to successfully implement our long-term strategy. In connection with our efforts to enhance our research and development capability with respect to next-generation display technologies, we opened the R&D Center in Paju, Korea in April 2012. In addition, we have further expanded our research and development resources by allocating some of our research and development personnel to the newly-opened LG Science Park, which is located in western Seoul and commenced its operations in December 2017. LG Science Park accommodates researchers from various LG Group-affiliated companies with expertise in a broad range of disciplines, including electronics, chemistry, nanotechnology, display, fabrication, life sciences and new materials, to focus on developing and testing innovative new technologies.

We complement our in-house research and development capability with collaborations with universities and other third parties. For example, we provide project-based funding to both domestic and overseas universities as a means to recruit promising engineering students and to research and develop new technologies. In April 2016, we entered into an agreement with Pohang University of Science and Technology, or POSTECH, to establish the LGD-POSTECH Cooperation Center within the university's Research Institute of Electrical Circuit, Algorithm and Advanced Materials to conduct research into display panel technologies, including OLED technology. We also enter into joint research and development agreements from time to time with third parties for the development of technologies in specific fields. In addition, we belong to several display industry consortia, and we receive annual government funding to support our research and development efforts. As of December 31, 2018, we employed over 4,900 engineers, researchers, designers, technicians and support personnel in connection with our research and development activities.

While we primarily rely on our own capacity for the development of new technologies in the display panel design and manufacturing process, we rely on third parties for certain key technologies to enhance our technology leadership, as further described in "—Intellectual Property" below.

Intellectual Property

Overview

Our business has benefited from our patent portfolio, which includes patents for display technologies, manufacturing processes, products and applications related to the production of TFT-LCD and OLED panels. We hold a large number of patents in Korea and in other countries, including in the United States, China, Japan, Germany, France, Great Britain, Taiwan, India and Vietnam. These patents will expire at various dates upon the expiration of their respective terms ranging from 2019 to 2037. In March 2014, we formed Unified Innovative Technology, LLC in the United States, a limited liability company solely owned by us for the purpose of patent portfolio management.

As part of our ongoing efforts to prevent infringements on our intellectual property rights and to keep abreast of critical technology developments by our competitors, we closely monitor patent applications in Korea and various other countries in which we sold our products. We intend to continue to file patent applications, where appropriate, to protect our proprietary technologies. We also enter into confidentiality agreements with each of our employees and consultants upon the commencement of an employment or consulting relationship. These agreements generally provide that all inventions, ideas, discoveries, improvements and copyrightable material made or conceived by the individual arising out of the employment or consulting relationship and all confidential information developed or made known to the individual during the term of the relationship are our exclusive property. In addition, we have increased our efforts to safeguard our propriety information by engaging in in-house information protection awareness activities with our employees.

License Agreements

We enter into license or cross-license agreements from time to time with third parties with respect to various device and process technologies to complement our in-house research and development. We engage in regular discussions with third parties to identify potential areas for additional licensing of key technologies.

Expenses relating to our license fees and royalty payments under existing license agreements were \text{\text{\$\psi}}94 billion in 2016, \text{\$\psi}107 billion in 2017 and \text{\$\psi}117 billion (US\$105 million) in 2018, representing 6.6%, 5.6% and 5.7% of our research and development related expenditures in 2016, 2017 and 2018, respectively. We recognized royalty income in the amount of \text{\$\psi}17 billion in 2016, \text{\$\psi}20 billion in 2017 and \text{\$\psi}18 billion (US\$16 million) in 2018. The following are examples of license agreements we have entered into:

- We have a license agreement with each of Columbia University, Penn State University, Honeywell International, Honeywell
 Intellectual Properties, Plasma Physics Corporation and Fergason Patent Properties. Each license agreement provides for a
 non-exclusive license under certain patents relating to TFT-LCD technologies.
- We entered into a license agreement with Semiconductor Energy Laboratory which provides for a non-exclusive license under certain patents relating to TFT-LCD and AMOLED technologies.
- We entered into a cross-license agreement with each of Hitachi, HannStar and Hydis for a non-exclusive license under certain patents relating to display technologies.
- We entered into separate cross-license agreements with each of NEC and AU Optronics in connection with the settlement of
 certain patent infringement lawsuits. Under the agreements, each party grants the other party a license under certain patents
 relating to TFT-LCD technologies.
- We are licensed to use certain patents for our TFT-LCD products pursuant to a cross-license agreement between Philips Electronics and Toshiba Corporation.

In addition to the above, we have also entered into license or cross-license agreements with other third parties in the course of our business operations in connection with certain patents, which such third parties own or control.

As well as licensing key technologies from third parties, we aim to benefit from our own patents and other intellectual property rights by granting licenses to third parties from time to time in return for royalty payments. We have also entered into certain patent purchase and license agreements with third parties, where we receive a portion of the license payments.

Item 5.D. Trend Information

These matters are discussed under Item 5.A. and Item 5.B. above where relevant.

Item 5.E. Off-Balance Sheet Arrangements

For a discussion of our off-balance sheet arrangements, please see "— Factoring and securitization of accounts receivable", "— Letters of credit" and "— Payment guarantees" in Note 14 of the notes to our financial statements.

Item 5.F. Tabular Disclosure of Contractual Obligations

Presented in Item 5.B. above.

Item 5.G. Safe Harbor

See "Forward-Looking Statements."

Item 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

Item 6.A. Directors and Senior Management

Board of Directors

Our board of directors has the ultimate responsibility for the management of our business affairs. Our articles of incorporation provide for a board consisting of between five and seven directors, more than half of whom must be outside directors. Our shareholders elect all directors at a general meeting of shareholders. Under the Korean Commercial Code, a representative director of a company established in Korea is authorized to represent and act on behalf of such company and has the power to bind such company. Sang Beom Han is currently our sole representative director.

The term of office for our directors shall not exceed the closing of the annual general meeting of shareholders convened in respect of the last fiscal year within three years after they take office. Our board must meet at least once every quarter, and may meet as often as the chairman of the board of directors or the person designated by the regulation of the board of directors deem necessary or advisable.

The tables below set forth information regarding our current directors and executive officers. The business address of all of the directors and executive officers is LG Twin Towers, 128 Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, Korea.

Our Outside Directors

Our current outside directors are set out in the table below. Each of our outside directors meets the applicable independence standards set forth under the rules of the Korean Commercial Code and also meets the applicable independence criteria set forth under Rule 10A-3 of the Exchange Act.

Name	Date of Birth	Position	First Elected/ Appointed	Term Expires	Principal Occupation Outside of LG Display
Sung Sik Hwang	July 24, 1956	Director	January 2015	March 2021	Professor, Business Administration, Gachon University
Kun Tai Han	October 30, 1956	Director	March 2016	March 2022	Chief Executive Officer, Hans Consulting
Byoung Ho Lee	July 6, 1964	Director	March 2018	March 2021	Professor, Electrical and Computer Engineering, Seoul National University
Chang-Yang Lee	September 20, 1962	Director	March 2019	March 2022	Professor, Economics and Public Policy, Korea Advanced Institute of Science and Technology

Our Non-Outside Directors

Our current non-outside directors are set out in the table below:

Name	Date of Birth	Position	First Elected/ Appointed	Term Expires	Principal Occupation Outside of LG Display
Sang Beom Han	June 18, 1955	Representative Director, Vice Chairman and Chief Executive Officer	March 2012	March 2021	_
Donghee Suh	February 28, 1964	Chief Financial Officer, Director	March 2019	March 2020	_
Youngsoo Kwon	February 6, 1957	Chairman of the Board, Director	March 2019	March 2022	Representative Director and Vice Chairman, LG Corp.

Our Non-Director Executive Officers

Our current non-director executive officers are set out in the table below:

Name	Position	Responsibility and Division	Age
Hyung Seok Choi	Executive Vice President	Head of IT Business Unit	57
Sang Mun Shin	Executive Vice President	Chief Production Officer	59
In Byeong Kang	Executive Vice President	Chief Technology Officer	55
Yong Min Ha	Executive Vice President	Head of Mobile Development Group 1	52
Myoung Kyu Kim	Executive Vice President	Head of Mobile Business Unit	56
Jae Hoon Yang	Executive Vice President	Head of Business Support Group	55
Chang Ho Oh	Executive Vice President	Head of TV Business Unit	53
Youngkwon Song	Senior Vice President	Head of Strategy/Marketing Group	56
Kyung Ho Lee	Chief Research Fellow	Affiliated organization of Chief Technology Officer	57
Yeong Giu Hong	Senior Vice President	Head of Auditing & Management Consulting Division	56
Chul Gu Lee	Senior Vice President	Head of LG Display High-Tech (China) Co., Ltd.	58
Sang Hoon Lee	Senior Vice President	Head of TV Sales/Marketing Group	58
Byeong Koo Kim	Senior Vice President	Head of Mobile Development Group 2	51
Joo Hong Lee	Senior Vice President	Head of TV Development Group	53

Jung Sik Shin	Senior Vice President	Head of Automotive Business	56
Kang Yeol Oh	Senior Vice President	Head of Mobile Sales/Marketing Group	54
Tae Seung Kim	Senior Vice President	Head of pOC Technology Division	54
Sang Eon Jeon	Senior Vice President	Head of Quality Management Center	58
Yung Keun Choi	Senior Vice President	Head of Purchasing Group	57
Won Ho Cho	Senior Vice President	Head of Mobile Manufacture Center	55
Myungchul Jun	Chief Research Fellow	Head of Panel Performance Division	58
Jeong Hwan Kim	Senior Vice President	Head of IT Sales/Marketing Group	57
Duck Yong Kim	Senior Vice President	Head of TV Planning & Management Division	57
Jong Woo Kim	Senior Vice President	Head of TV Manufacture Center 1	53
Soo Young Yoon	Senior Vice President	Head of LGD Laboratory	53
Byung Dae Lim	Senior Vice President	Head of Global Legal Affairs Division	50
Hyun Chul Choi	Senior Vice President	Head of OC Research/Development Division	51
Sunghyun Kim	Senior Vice President	Head of Finance & Risk Management Division	51
Yoong Ki Min	Senior Vice President	Head of IT America Division 2	54
Young Sang Byun	Senior Vice President	Head of TV Manufacture2 Center	53
Jong Sun Park	Senior Vice President	Head of Commercial Business Division	53
Chang Dong Kim	Vice President	Head of PO Panel Performance Division	56
Yong Jun Choi	Vice President	Head of Corporate Planning & Control Division	54
Geon Tae Kim	Vice President	PO Panel Performance Division	54
Hwan Myeong Kim	Vice President	Head of Production Technology Center	55
J. Kenneth Oh	Vice President	Head of Intellectual Property Division	51
Jeonghwan (Jay) Yoon	Vice President	Affiliated organization of Automotive Business	54
Hyeon Woo Lee	Vice President	TV Business Unit	51
Han Seop Kim	Vice President	Head of OLED TV Product Development Division 1	53
Sang Ki Kwak	Vice President	Head of IT Customer/Quality Division	53
Min Su Park	Vice President	Head of LG Display Guangzhou Co., Ltd.	53
Sung Pill Yang	Vice President	Head of Mobile Quality Division	55
Min Kim	Vice President	Head of Module Center	55
Sang Ho Song	Vice President	Head of HR Group	50
Young Seok Choi	Vice President	Head of Product Technology Division	51
Bum Sik Kim	Vice President	Head of OLED Panel Performance Division	55
Hee Yeon Kim	Vice President	Head of IR Division	49
Kwang Hee Cho	Vice President	Head of Automotive Planning & Management Division	53
Calvin Lee	Vice President	Head of TV Europe and Asia Division	53
Woo Sup Shin	Vice President	Head of OLED Process Integration Division	49
Jeom Jae Kim	Vice President	Head of LCD TV Panel Development Division	50
Jang Sig Kim	Vice President	Head of Corporate Strategy Division	56
Seung Min Lim	Vice President	Head of Corporate Business Management Division	52
Wan Seop Kim	Vice President	Head of Mobile Planning & Management Division	53
Jong Sang Baek	Vice President	Head of Advanced Quality Development Division	52
Je Bong Kim	Vice President	Head of Outsourcing Division	53
Jin Kyu Lee	Vice President	Head of Process Innovation Group	49
Jeong Ki Park	Vice President	Head of IT Development Group	50

Seong Hee Kim	Vice President	Head of OLED TFT Division	50
Jae Hong Park	Vice President	Head of Mobile Product Development Division 2	50
Ju Il Kim	Vice President	Head of TV Quality Division	52
Kwang Jin Kim	Vice President	TV Business Unit	50
Andy Kim	Vice President	Head of Global Operation Group	52
Kyu Young Ko	Vice President	TV Business Unit	52
Soon Kwang Hong	Vice President	Head of Mobile Product Development Division 1	48
Young Jun Son	Vice President	Head of PR & Public Affairs Division	52
Yong Bum Kim	Vice President	Head of Mobile Product Planning Division	50
Sang Gul Lee	Vice President	Device Process Research Division	51
Young Jin Kim	Vice President	Head of Paju Module Factory	54
Seung Mo Ahn	Vice President	TV Business Unit	50
Ki Yung Kim	Vice President	Head of IT Planning & Management Division	51
Jong Seong Kim	Vice President	Head of pOT2 Factory	51
Chang Han Kim	Vice President	Head of TV Marketing Division	50
Keuk Sang Kwon	Vice President	Head of Mobile Product Development Division 5	48
Kwon Shik Park	Vice President Vice President	Head of Device Process Research Division	49
Hyun Joo Kim	Vice President	Head of HRD Division	51
Pil Yong Kim	Vice President	Head of Legal & Compliance Division	48
Hyo Dae Bae	Chief Research Fellow	LGD Laboratory	54
Chang Wook Han	Chief Research Fellow	Affiliated organization of Chief Technology Officer	54
Dong Eun Lee	Vice President	Head of China Business Management Division	51
Yeon Ho Hur	Vice President	Head of FA Technology Division	52
Hae Cheol Lee	Vice President	Head of Paju Business Supporting Division	52
Kyung Soo Park	Vice President	Head of IT Asia Division	51
Chang Sub Choi	Vice President	Head of TV Japan Division	52
Yoo Seok Park	Vice President	Head of LG Display (China) Co., Ltd.	48
Chang Hoon Choi	Vice President	Head of LTPS Factory	49
Soon Bum Shin	Vice President	Head of PO Module Technology Division	52
Jin Nam Park	Vice President	Head of Purchasing Division 2	47
Doo Jong Jin	Vice President	Purchasing Group	51
Bu Yeol Lee	Vice President	Head of R&D Strategy Division	47
Chang Mog Jo	Vice President	Head of E5 Factory	53
Ki Joon Jin	Vice President	Head of Mobile Marketing Division	51
Seong Hoon Choi	Vice President	Head of SCM PI Division	50
Yu Taek Huh	Vice President	Head of Safety & Health Division	49
Jin Gu Jeung	Vice President	Head of Gumi Panel Factory	49
Chae Woo Choi	Vice President	Head of TV Product Planning Division	49
Sang Yoon Park	Vice President	Head of IT Product Development Division 2	50
Hong Sung Song	Vice President	TV Business Unit	51
Eun Kuk Kyung	Vice President	Head of Accounting Division	49
Young Dall Park	Vice President	Head of HRM Division	48
Yong In Park	Vice President	Head of Mobile Panel Development Division 2	49
Seung Jun Han	Vice President	Head of Mechanism Optics Research Division	50
Hoon Jeong	Vice President	Head of IT Panel Development Division	46
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Myung Su Suk	Vice President	Head of LG Display Vietnam Haiphong Co., Ltd.	48
Jong Seo Yoon	Vice President	Head of IT Product Planning Division	48
Teddy Hwang	Vice President	Head of Mobile Panel Development Division 1	44
Seung Ho Kwon	Vice President	Head of OLED Cell Division	48
Tae Rim Lee	Vice President	TV Development Group	44
In Hyuk Song	Vice President	Head of Convergence Technology Research Division	41
Tae Shick Kim	Chief Research Fellow	OC Research/Development Division	50
Seong Hoon Chun	Vice President	Strategy/Marketing Group	48

Item 6.B. Compensation

The aggregate remuneration and benefits-in-kind we paid in 2018 to our directors was \(\pi 3.8\) billion (US\\$3.4\) million). This included \(\pi 1,492\) million (US\\$1.3\) million) in salary and \(\pi 1,320\) million (US\\$1.2\) million) in bonus paid to Sang Beom Han, our chief executive officer, and \(\pi 441\) million (US\\$0.4\) million) in salary and \(\pi 222\) million (US\\$0.2\) million) in bonus paid to Sang Don Kim, our former chief financial officer.

The aggregate remuneration and benefits-in-kind we paid in 2018 to our non-director executive officers was \wxi53 billion (US\$45 million).

The compensation of the five individuals who received the highest compensation among those who received total annual compensation exceeding \,\frac{\text{W}}{500}\) million in 2018 was as follows:

		Composition of Total Compensation				
Nama	Position	Solory	Bonus ⁽¹⁾	Retirement Benefits		Total
<u>Name</u>	1 Osition	Salary Bonus ⁽¹⁾ Benefits (in millions of Won)			Compensation	
Sang Beom Han	Chief Executive Officer	₩1,492	₩1,320	_	₩	2,812
Yong Kee Hwang ⁽²⁾	President	1,021	316			1,337
In Byeong Kang	Vice President	518	273			791
Sang Deok Yeo(3)	Advisor	596	438	3,121		4,155
Byung Chul Ahn	Outside Advisor	303	213	902		1,418

⁽¹⁾ Based on our performance in 2017.

Our articles of incorporation provide for a stock option plan to aid retention of executives and key staff and to provide an incentive to meet strategic objectives. All of the stock options we have previously granted have expired and none are currently outstanding. In addition, remuneration for our directors is determined by shareholder resolution, and severance payments to our directors are made in accordance with our regulations on severance payments adopted by our shareholders. We also maintain a cash-based incentive plan for our executive officers and other key managerial employees adopted by our board of directors. Incentive payments are determined based on various long-term performance criteria and paid annually, subject to our cash resources and performance in such year. In addition, our executive officers and other key managerial employees are also eligible for bonuses payable under our employee profit sharing plan if certain performance criteria are met.

We carry liability insurance for the benefit of our directors and officers against certain liabilities incurred by them in their official capacities. This insurance covers our directors and officers, as well as those of our subsidiaries, against certain claims, damages, judgments and settlements, including related legal costs, arising from a covered individual's actual or alleged breaches of duty, neglect or other errors, arising in connection with such individual's performance of his or her official duties. The insurance protection also extends to claims, damages, judgments and settlements, including related legal costs, arising out of shareholders' derivative actions or otherwise relating to our securities. Policy exclusions include, but are not limited to, claims relating to fraud, willful misconduct or criminal acts, as well as the payment of punitive damages. In 2018, we paid a premium of approximately US\$1.3 million in respect of this insurance policy.

Item 6.C. Board Practices

See "Item 6.A. Directors and Senior Management" above for information concerning the terms of office and contractual employment arrangements with our directors and executive officers.

⁽²⁾ Mr. Hwang retired from his position as of March 31, 2019.

⁽³⁾ Mr. Yeo and Mr. Ahn are former officers who retired from their respective positions in the company as of March 31, 2018.

Committees of the Board of Directors

We currently have three committees that serve under our board of directors:

- Audit Committee;
- Outside Director Nomination Committee; and
- Management Committee

Under our articles of incorporation, our board of directors may establish other committees if they deem them necessary. Our board of directors appoint each member of these committees except that candidates for the Audit Committee will first be elected by our shareholders at the general meeting of shareholders.

Audit Committee

Under Korean law and our articles of incorporation, we are required to have an Audit Committee. Our Audit Committee is currently comprised of three outside directors: Sung Sik Hwang, Kun Tai Han and Chang-Yang Lee. The chairman is Sung Sik Hwang. Members of the Audit Committee are elected by our shareholders at the annual general meeting of shareholders and all members must meet the applicable independence criteria set forth under the rules and regulations of the Sarbanes-Oxley Act of 2002 and the Korean Commercial Code. The committee reviews all audit and compliance-related matters and makes recommendations to our board of directors. The Audit Committee's primary responsibilities include the following:

- engaging or dismissing independent auditors;
- approving independent audit fees;
- approving audit and non-audit services;
- reviewing annual and interim financial statements;
- reviewing audit results and reports, including management comments and recommendations;
- reviewing our system of controls and policies, including those covering conflicts of interest and business ethics;
- assessing compliance with disclosure and filing obligations;
- considering significant changes in accounting practices; and
- examining improprieties or suspected improprieties.

In addition, in connection with general meetings of shareholders, the committee examines the agenda for, and financial statements and other reports to be submitted by, the board of directors at each general meeting of shareholders. Our external auditor reports directly to the Audit Committee. Our external auditor is invited to attend meetings of this committee when needed or when matters pertaining to the audit are discussed.

The committee holds regular meetings at least once each quarter, and more frequently as needed.

Outside Director Nomination Committee

Under Korean law and our articles of incorporation, we are required to have an Outside Director Nomination Committee for the nomination of outside directors. Our Outside Director Nomination Committee is currently comprised of two outside directors, Byoung Ho Lee and Kun Tai Han, and one non-outside director, Youngsoo Kwon. The Outside Director Nomination Committee reviews the qualifications of potential candidates for outside directors and proposes nominees to serve on our board of directors.

The committee holds meetings as necessary for the nomination of outside directors.

Management Committee

The Management Committee is comprised of two non-outside directors, Sang Beom Han and Donghee Suh. The chairman is Sang Beom Han. The committee's primary responsibilities include making recommendations regarding matters relating to our operation and other matters delegated to the committee by our board of directors.

The committee holds meetings from time to time as needed.

Item 6.D. Employees

As of December 31, 2018, we had 58,947 employees, including 29,236 employees in our overseas subsidiaries. The following table provides a breakdown of our employees by function as of December 31, 2016, 2017 and 2018:

	As c	As of December 31,		
Employees ⁽¹⁾	2016	2017	2018	
Production	38,502	42,895	47,873	
Technical ⁽²⁾	8,039	8,459	8,431	
Sales & Marketing	1,545	1,545	1,610	
Management & Administration	1,008	992	1,033	
Total	49,094	53,891	58,947	

- (1) Includes employees of our subsidiaries.
- (2) Includes research and development and engineering personnel.

To recruit promising engineering students at leading Korean universities, we work with these universities on research projects where these students can gain exposure to our research and development efforts. We also provide on-the-job training for our new employees and develop training programs to identify and promote new leaders.

As of December 31, 2018, more than half of our employees based in Korea were union members, and production employees accounted for substantially all of these members. We have a collective bargaining arrangement with our labor union, which is negotiated once a year. We consider our relationship with our employees to be good.

The salaries of our employees are reviewed annually. Salaries are adjusted based on individual and team performance, industry standards and inflation. As an incentive, discretionary bonuses may be paid based on the performance of individuals, and a portion of our profits may be paid to our employees under our profit sharing plan if certain performance criteria are achieved. We also provide a wide range of benefits to our employees including medical insurance, employment insurance, workers compensation, free medical examinations, child tuition and education fee reimbursements and low-cost housing for certain employees.

Under the Guarantee of Workers' Retirement Benefits Act, employees with one year or more of service are entitled to receive, upon termination of their employment, a lump-sum severance payment based on the length of their service and their average wage during the last three months of employment. As of December 31, 2018, our recognized liabilities for defined benefit obligations amounted to \text{W45} billion (US\$41 million), including amounts relating to employees of our foreign subsidiaries. See Note 12 of the notes to our financial statements for a discussion on the method of calculating our recognized liabilities for defined benefit obligations.

As of December 31, 2018, our employee stock ownership association owned approximately 0.0008% of our common stock.

Item 6.E. Share Ownership

Common Stock

The persons who are currently our executive officers held, as a group, 48,355 shares of our common stock as of April 24, 2019, the most recent date for which this information is available. Our executive officers acquired our shares of common stock through our employee stock ownership association and pursuant to open market purchases on the Korea Exchange. Due to Korean law restrictions, our chief executive officer and chief financial officer do not participate in the employee stock ownership association. Each of our directors and executive officers beneficially owns less than one percent of our common stock on an individual basis.

Starting in 2013, where bonus and incentive payments exceed certain thresholds, our executive officers and certain other key managerial employees are required to use a certain percentage of their bonus and incentive payments to purchase our shares of common stock, which are then required to be held until their resignation or termination.

In addition, our articles of incorporation provide for a stock option plan to aid retention of executives and key staff and to provide an incentive to meet strategic objectives. All of the stock options we have previously granted have expired and none are currently outstanding.

Item 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

Item 7.A. Major Shareholders

The following table sets forth information regarding beneficial ownership of our common stock by each person or entity known to us as of April 24, 2019 to own beneficially more than 5% of our outstanding shares:

	Number of Shares of	
Beneficial Owner	Common Stock	Percentage
LG Electronics	135,625,000	37.9%
National Pension Service	24,515,566	6.9%

Other than as set forth above, no other person or entity known by us to be acting in concert, directly or indirectly, jointly or severally, owned more than 5% or more of our outstanding common stock or exercised control or could exercise control over us as of April 24, 2019. None of our major shareholders identified above has voting rights different from those of our other shareholders.

Item 7.B. Related Party Transactions

We engage from time to time in a variety of transactions with related parties, including the sale of our products to, and the purchase of raw materials and components from, such related parties. See Notes 8 and 28 of the notes to our financial statements. We have conducted our transactions with related parties based on arm's length negotiations taking into account such considerations as we would in comparable transactions with a non-related party.

From time to time, we provide payment guarantees for the benefit of certain of our subsidiaries. For a discussion of such payment guarantee obligations, please see "Item 5.B. Liquidity and Capital Resources."

Transactions with Companies in the LG Group

Sales to LG Electronics

We sell display panels, primarily large-sized panels for televisions, notebook computers and desktop monitors and small-sized panels for tablet computers and mobile and other applications, to LG Electronics and its subsidiaries on a regular basis, as both an end-brand customer and as a system integrator for use in products they assemble on a contract basis for other end-brand customers. Pricing and other principal terms of the sales to LG Electronics are negotiated based on then-prevailing market terms and prices as adjusted for LG Electronics' requirements such as volume and product specifications and our internal projections regarding market trends, which are the same considerations that we take into account when negotiating pricing and principal terms of sales to our non-affiliated end-brand customers.

Sales to LG Electronics and its subsidiaries, which include sales to LG Electronics as an end-brand customer and system integrator, amounted to \(\prec{\psi}5,171\) billion (US\$4,647\) million), or 21.2% of our sales, in 2018.

Sales to LG International

We sell our products to certain subsidiaries of LG International, our affiliated trading company, in regions where doing so is consistent with local market practices. These subsidiaries of LG International process orders from and distribute products to customers located in their region.

Sales to LG International and its subsidiaries amounted to \W716 billion (US\$643 million), or 2.9% of our sales, in 2018. We sell our products to these subsidiaries of LG International at such prices and on terms determined based on then-prevailing market terms and prices as adjusted for LG International's requirements such as volume and our internal projections regarding market trends.

Purchases from LG Electronics

We purchase equipment, printed circuit boards, photo masks, raw materials, components and certain services, such as waste water management and transportation, warehousing and other related logistics services, from LG Electronics and its subsidiaries. Our purchases from LG Electronics and its subsidiaries amounted to \text{\text{\$\text{\$W}\$1,933 billion (US\$1,737 million), or 8.4% of our total purchases, in 2018.

Purchases from LG International

We procure a portion of our production materials, supplies and services, from LG International and its subsidiaries. We use LG International and its subsidiaries in order to take advantage of their relationships with vendors, experience in negotiations and logistics as well as their ability to obtain volume discounts. Purchase prices we pay to these subsidiaries of LG International and other terms of our transactions with them are negotiated based on then-prevailing market terms and prices as adjusted for our requirements such as volume and specifications and our internal projections regarding market trends. We expect to continue to utilize LG International's overseas subsidiaries for the procurement of a portion of our production materials, supplies and services.

Our purchases, including purchases of materials, supplies and services, from LG International and its subsidiaries, amounted to \wx300 billion (US\$270 million), or 1.3% of our total purchases, in 2018.

Other Purchases

Under a master purchase agreement, we procure, on an "as-needed" basis, certain of the raw materials, components and other materials necessary for our production process from other companies in the LG Group. Our purchases of raw materials, such as polarizers, from LG Chem, an affiliate of LG Corp., amounted to \(\pi\)1,234 billion (US\$1,109 million), or 5.3% of our total purchases, in 2018.

Our total purchases, including purchases of materials, supplies and services, from companies in the LG Group, excluding LG Electronics, LG International and LG Chem and their respective subsidiaries, amounted to \(\pi_3,328\) billion (US\\$2,991\) million), or 14.4\% of our total purchases, in 2018.

Intellectual Property Related Agreements with LG Corp. and LG Electronics

We have entered into successive trademark license agreements with LG Corp., the holding company of the LG Group, for use of the "LG" name. Under the terms of the current agreement, we are required to make monthly payments to LG Corp. in the aggregate amount per year of 0.2% of our sales after deducting advertising expenses. As of April 24, 2019, we have made all monthly payments required to be made to LG Corp. in accordance with the terms of the current agreement.

In addition, we benefit from certain licenses extended to us from license or cross-license agreements between LG Electronics and third parties. Under the terms of the joint venture agreement establishing LG.Philips LCD Co., Ltd., LG Electronics had assigned most of its patents relating to the development, manufacture and sale of TFT-LCD products to us and we had agreed to maintain joint ownership of those patents that were not assigned to us. Pursuant to a grantback agreement entered into with LG Electronics in July 2004, in the event of any intellectual property dispute between LG Electronics and a third party relating to those patents jointly owned by LG Electronics and us, we intend to allow LG Electronics to assert ownership in those patents for all non TFT-LCD applications and to license or grant other rights in such patents for use by the licensee in non-TFT-LCD applications in order to settle such disputes.

Transactions with Directors and Officers

Certain of our directors and executive officers also serve as executive officers of companies with which we do business. None of our directors or executive officers has or had any interest in any of our business transactions that are or were unusual in their nature or conditions or significant to our business.

Item 7.C. Interests of Experts and Counsel

Not applicable.

Item 8. FINANCIAL INFORMATION

Item 8.A. Consolidated Statements and Other Financial Information

See "Item 18. Financial Statements" and pages F-1 through F-111.

Legal Proceedings

We are involved from time to time in certain routine legal actions incidental to our business. However, except for the ongoing proceedings described below, we are not currently involved in any material litigation or other proceedings the outcome of which we believe might, individually or taken as a whole, have a material adverse effect on our results of operations or financial condition. In addition, except as described below, we are not aware of any other material pending or threatened litigation against us.

Antitrust and Others

In December 2006, LG Display received notices of investigation by the U.S. Department of Justice, the European Commission, the Korea Fair Trade Commission and the Japan Fair Trade Commission with respect to possible anti-competitive activities in the TFT-LCD industry. Subsequently, the Competition Bureau of Canada, the Secretariat of Economic Law of Brazil, the Taiwan Fair Trade Commission and the Federal Competition Commission of Mexico announced investigations regarding the same. Between November 2008 and June 2014, each of such investigations and subsequent legal proceedings brought by the relevant competition authorities was settled or resolved, and we have paid fines of US\$400 million pursuant to our November 2008 settlement agreement with the U.S. Department of Justice, €210 million pursuant to a December 2010 decision by the European Commission and R\$33.9 million pursuant to an August 2014 settlement agreement with the Secretariat of Economic Law of Brazil.

After the commencement of the U.S. Department of Justice investigation, various class action complaints and separate claims by direct and indirect purchasers of our products were filed against us and other TFT-LCD panel manufacturers in the United States and Canada, alleging violation of respective antitrust and related laws. In addition, from 2010 to 2012, the attorneys general of Arkansas, California, Florida, Illinois, Michigan, Mississippi, Missouri, New York, Oklahoma, Oregon, South Carolina, Washington, West Virginia and Wisconsin filed complaints against us, alleging similar antitrust violations. In June 2018, the attorney general of the Commonwealth of Puerto Rico filed a complaint against us and other TFT-LCD panel manufacturers alleging unjust enrichment in connection with the aforementioned U.S. Department of Justice investigation. Since then, we have reached settlements with each of the plaintiff classes and separate plaintiffs, as well as with the aforementioned state attorneys general, with the exception of the attorney general of the Commonwealth of Puerto Rico, which settlements were duly approved by the applicable courts and, in the case of the state attorneys general actions, by their respective state governments. As of April 24, 2019, we have not been served with the complaint from the attorney general of the Commonwealth of Puerto Rico.

A number of claims alleging damages were filed against LG Display and other entities in the United Kingdom as follow-on claims from the above-described European Commission's decision in December 2010, comprising claims by iiyama (UK) Limited and its affiliates ("iiyama") in December 2014, and Argos Limited and others ("Argos"), Granville Technology Group and others ("Granville") and Ingram Micro and others ("Ingram"), each in December 2016. As of April 24, 2019, we are vigorously defending ourselves against claims by Granville and iiyama. Ingram discontinued its claims against LG Display in June 2017, and we have reached a settlement with Argos in November 2018.

In December 2013, a class action complaint was filed by Hatzlacha, a consumer organization, on behalf of Israeli consumers against LG Display and other defendants in the Central District in Israel. In July 2017, the Supreme Court of Israel ruled in favor of the defendants to affirm the District Court's decision to revoke the leave to serve the class action on the defendants outside the jurisdiction of Israel. In August 2017, Hatzlacha filed a number of motions to uphold service in the Central District in Israel under different legal grounds, which are currently being contested by the defendants.

In each of the foregoing matters that are ongoing, we are continually evaluating the merits of the respective claims and vigorously defending ourselves. Irrespective of the validity or the successful assertion of the claims described above, we may incur significant costs with respect to litigating or settling any or all of the asserted claims. While we continue to vigorously defend the various proceedings described above, it is possible that one or more proceedings may result in cash outflow to settle or resolve these claims. We recognize provisions with respect to those legal claims in which our management has concluded that there is a present or constructive obligation arising from a past event, it is more likely than not that an outflow of resources will result to settle the obligation, and a reliable estimate can be made of the amount of the obligation. As of December 31, 2018, we have not recognized any provisions with respect to any legal claims based on our management's assessment of the likely outcomes. However, the actual outcomes may be different from those estimated as of December 31, 2018 and may have an adverse effect on our operating results or financial condition.

Dividends

Annual dividends must be approved by the shareholders at the annual general meeting of shareholders and interim dividends must be approved by the board of directors. Cash dividends may be paid out of retained earnings that have not been appropriated to statutory reserves.

At our annual general meeting of shareholders that was held on March 11, 2016, we declared a cash dividend of \$\foware\$500 per share of common stock, amounting to a total cash dividend of \$\foware\$179 billion, to our shareholders of record as of December 31, 2015 and distributed the cash dividends to such shareholders on April 8, 2016. On March 23, 2017, we declared a cash dividend of \$\fowarepsilon\$500 per share of common stock, amounting to a total cash dividend of \$\fowarepsilon\$179 billion, to our shareholders of record as of December 31, 2016 and distributed the cash dividends to such shareholders on April 13, 2017. On March 15, 2018, we declared a cash dividend of \$\fowarepsilon\$500 per share of common stock, amounting to a total cash dividend of \$\fowarepsilon\$179 billion to our shareholders of record as of December 31, 2017 and distributed the cash dividends to such shareholders on April 12, 2018. At our shareholders meeting on March 15, 2019, we did not declare any cash dividend to our shareholders.

Item 8.B. Significant Changes

Except as disclosed elsewhere in this annual report, we have not experienced any significant changes since the date of our audited consolidated financial statements included in this annual report.

Item 9. THE OFFER AND LISTING

Item 9.A. Offer and Listing Details.

Principal Trading Market

The principal trading market for our common stock is the Korea Exchange. Our common stock, which is in registered form and has a par value of \$\fowardar{W}5,000\$ per share of common stock, has been listed on the Korea Exchange since July 23, 2004 under the identifying code 034220. As of December 31, 2018, 357,815,700 shares of common stock were outstanding. Our common stock is also listed on the New York Stock Exchange in the form of ADSs. The ADSs have been issued by Citibank as ADS depositary and have been listed on the New York Stock Exchange under the ticker symbol "LPL" since July 22, 2004. One ADS represents one-half of one share of common stock. As of December 31, 2018, 20,890,926 ADSs were outstanding.

Item 9.B. Plan of Distribution

Not applicable.

Item 9.C. Markets

See "Item 9.A. Offering and Listing Details."

Item 9.D. Selling Shareholders

Not applicable.

Item 9.E. Dilution

Not applicable.

Item 9.F. Expenses of the Issue

Not applicable.

Item 10. ADDITIONAL INFORMATION

Item 10.A. Share Capital

Not applicable.

Item 10.B. Memorandum and Articles of Association

Description of Capital Stock

This section provides information relating to our capital stock, including brief summaries of material provisions of our current articles of incorporation, the Financial Investment Services and Capital Markets Act and the Korean Commercial Code. The following summaries are subject to, and are qualified in their entirety by reference to, our articles of incorporation and the applicable provisions of the Financial Investment Services and Capital Markets Act and the Korean Commercial Code.

General

Under our articles of incorporation, which was last amended in March 2019, the total number of shares authorized to be issued by us is 500,000,000 shares, which consists of shares of common stock and non-voting preferred stock, both with par value of \$\foware\$5,000 per share. We are authorized to issue preferred stock of up to 40,000,000 shares. As of December 31, 2018, 357,815,700 shares of common stock were issued. All of the issued and outstanding shares are fully-paid and non-assessable and are in registered form.

Our articles of incorporation reflect the adoption of the electronic securities system to be launched in September 2019, pursuant to the Act on Electronic Registration of Stocks, Bonds, Etc. (the "Electronic Registration Act"). Accordingly, following the launch of such system, in lieu of issuing share certificates or certificates of preemptive rights, we plan to electronically register the shares that would otherwise be indicated on certificates of preemptive rights on an electronic registry of an electronic registration institution.

Dividends

We distribute dividends to our shareholders in proportion to the number of shares owned by each shareholder. The shares represented by the ADSs have the same dividend rights as other outstanding shares.

Holders of preferred shares are entitled to receive dividends in priority to the holders of common stock. The amount of dividends for preferred shares is determined by our board of directors within a range of 1% to 10% of par value at the time the shares are issued, provided that if the dividend amount on the shares of common stock exceeds that on the preferred shares, holders of preferred shares will also participate in the distribution of the excess dividend amount in the same proportion as holders of common stock. If the amount available for dividends is less than the aggregate amount of such minimum dividend, the holders of preferred shares will be entitled to receive the accumulated unpaid dividends in priority to the holders of common stock from the dividends payable in respect of the next fiscal year.

We declare dividends annually at the annual general meeting of shareholders which is held within three months after the end of the fiscal year. We pay the annual dividend shortly after the annual general meeting to the shareholders of record as of the end of the preceding fiscal year. We may distribute the annual dividend in cash or in shares. However, a dividend of shares must be distributed at par value. If the market price of the shares is less than their par value, dividends in shares may not exceed one-half of the annual dividend. We have no obligation to pay any annual dividend unclaimed for five years from the payment date.

Under the Korean Commercial Code, we may pay an annual dividend only out of the excess of our net assets, on a non-consolidated basis, over the sum of (1) our stated capital and (2) the total amount of our capital surplus reserve and legal reserve accumulated up to the end of the relevant dividend period. We may not pay an annual dividend unless we have set aside a legal reserve in an amount equal to at least 10% of the cash portion of the annual dividend or unless we have accumulated a legal reserve of not less than one-half of our stated capital. We may not use legal reserves to pay cash dividends but may transfer amounts from legal reserves to capital stock or use legal reserves to reduce an accumulated deficit.

Also, we may pay an interim dividend in accordance with a resolution of the board of directors to our shareholders who are registered in the shareholders' register as of July 1 of the relevant fiscal year, and such an interim dividend shall be made in cash.

Distribution of Free Shares

In addition to paying dividends in shares out of our retained or current earnings, we may also distribute to our shareholders an amount transferred from our capital surplus or legal reserve to our stated capital in the form of free shares. Free shares are shares newly issued to existing shareholders without consideration, much like stock dividends, except that in the case of free shares a portion of the reserves, as opposed to earnings, is transferred to capital. We must distribute such free shares to all of our shareholders in proportion to their existing shareholdings. We may distribute free shares when we determine that our capital surplus or legal reserves are too large relative to our paid-in capital.

Preemptive Rights and Issuance of Additional Shares

We may issue authorized but unissued shares at the times and, unless otherwise provided in the Korean Commercial Code, on the terms our board of directors may determine. All of our shareholders are generally entitled to subscribe for any newly issued shares in proportion to their existing shareholdings. We must offer new shares on uniform terms to all shareholders who have preemptive rights and are listed on our shareholders' register as of the relevant record date. However, under the Korean Commercial Code, we may vary the specific terms of these preemptive rights for different classes of shares without shareholder approval. To the extent that such different terms result in placing any particular class of shareholders at a disadvantage relative to other classes, a special resolution by that disadvantaged class of shareholders is necessary.

We must give public notice of the preemptive rights regarding new shares and their transferability at least two weeks before the relevant record date. Our board of directors may determine how to distribute shares for which preemptive rights have not been exercised or where fractions of shares occur.

Under our articles of incorporation, we may issue new shares pursuant to a board resolution to persons other than existing shareholders, who however will not have preemptive rights, if the new shares are, among others:

- publicly offered pursuant to the Financial Investment Services and Capital Markets Act;
- issued to members of our employee stock ownership association;
- represented by depositary receipts;
- issued upon exercise of stock options granted to our officers and employees;
- issued to corporations, institutional investors or domestic or overseas financial institutions to achieve our operational objectives; or
- issued for the purpose of drawing foreign investment when we deem it necessary for our business needs;

provided that the aggregate number of shares so issued do not exceed 20% of the total number of issued and outstanding shares.

In addition, we may issue convertible bonds or bonds with warrants, respectively, up to an aggregate face amount of \(\frac{\psi}{2}.5\) trillion to persons other than existing shareholders. The classes of shares to be issued upon conversion of bonds or exercise of warrants shall be common stock. In addition, pursuant to the Electronic Registration Act, in lieu of issuing bond or warrant certificates, we plan to electronically register the bonds and warrant rights that would otherwise be indicated on warrant certificates on an electronic registry of an electronic registration institution beginning in September 2019.

Members of our employee stock ownership association, whether or not they are our shareholders, generally have a preemptive right to subscribe for up to 20% of the shares publicly offered pursuant to the Financial Investment Services and Capital Markets Act. As of December 31, 2018, approximately 0.0008% of our common stock was held by our employee stock ownership association.

General Meeting of Shareholders

We hold the annual general meeting of shareholders within three months after the end of each fiscal year. Subject to a board resolution or court approval, we may hold an extraordinary general meeting of shareholders:

- as necessary;
- at the request of holders of an aggregate of 3% or more of our outstanding shares;
- at the request of shareholders holding an aggregate of 1.5% or more of our outstanding shares for at least six consecutive months; or
- at the request of our audit committee.

Holders of preferred shares may request a general meeting of shareholders only after the preferred shares become entitled to vote or are enfranchised, as described under "—Voting Rights" below.

We must give shareholders written notice setting out the date, place and agenda of the meeting at least two weeks before the date of the general meeting of shareholders. However, for holders of less than 1% of the total number of issued and outstanding voting shares, we may provide notice through our website. If we cannot give such notice on our website due to technical difficulties or other unavoidable circumstances, we must provide such notice in *Maeil Business Newspaper* and *The Chosun Ilbo*, both daily newspapers of general circulation published in Seoul.

Shareholders not on the shareholders' register as of the record date are not entitled to receive notice of the general meeting of shareholders, attend or vote at the meeting. Holders of non-voting preferred shares, unless enfranchised, are not entitled to receive notice of general meetings of shareholders.

The place of our general meetings of shareholders is decided by our board of directors, which can be held in our head office, our Paju Display Cluster or any other place as designated by our board of directors.

Directors

Under the Korean Commercial Code and our articles of incorporation, any director wishing to enter into a transaction with us or our subsidiaries in his or her capacity is required to obtain prior approval from the board of directors, and any director with an interest in the transaction may not vote at the meeting of the board of directors to approve the transaction.

Voting Rights

Holders of our common stock are entitled to one vote for each share of common stock, except that voting rights may not be exercised with respect to shares of common stock held by us or by a corporate shareholder in which we own, directly or indirectly, more than 10% of its voting stock. The Korean Commercial Code permits cumulative voting, under which voting method each shareholder would have multiple voting rights corresponding to the number of directors to be appointed in the voting and may exercise all voting rights cumulatively to elect one director. However, our articles of incorporation prohibit cumulative voting.

According to our current articles of incorporation, our shareholders may adopt resolutions at a general meeting by an affirmative majority vote of the voting shares present or represented at the meeting, where the affirmative votes also represent at least one-fourth of our total voting shares then issued and outstanding. However, under the Korean Commercial Code and our articles of incorporation, the following matters, among others, require approval by the holders of at least two-thirds of the shares present or represented at a meeting, where the affirmative votes also represent at least one-third of our total voting shares then issued and outstanding:

- amending our articles of incorporation;
- removing a director;
- effecting any dissolution, merger or consolidation of us;
- transferring the whole or any significant part of our business;
- effecting our acquisition of all of the business of any other company;
- effecting our acquisition of a part of the business of any other company that has a material effect on our business; or
- issuing any new shares at a price lower than their par value.

In general, holders of preferred shares are not entitled to vote on any resolution or receive notice of any general meeting of shareholders. However, in the case of amendments to our articles of incorporation, any merger or consolidation involving us, capital reductions or in certain other cases in which the rights or interests of the preferred shares are affected, approval of the holders of preferred shares is required. We may obtain such approval by a resolution of holders of at least two-thirds of the preferred shares present or represented at a class meeting of the holders of preferred shares, where the affirmative votes also represent at least one-third of our total issued and outstanding preferred shares. In addition, if we are unable to pay dividends on preferred shares as provided in our articles of incorporation, the holders of preferred shares will become enfranchised and will be entitled to exercise voting rights until those dividends are paid. The holders of enfranchised preferred shares have the same rights as holders of common stock to request, receive notice of, attend and vote at a general meeting of shareholders.

Shareholders may exercise their voting rights by proxy.

Holders of ADRs exercise their voting rights through the ADR depositary, an agent of which is the record holder of the underlying shares. Subject to the provisions of the deposit agreement, ADR holders are entitled to instruct the ADR depositary how to vote the shares underlying their ADSs.

Rights of Dissenting Shareholders

In some limited circumstances, including the transfer of all or any significant part of our business and our merger or consolidation with another company, dissenting shareholders have the right to require us to purchase their shares. To exercise this right, shareholders must submit to us a written notice of their intention to dissent before the general meeting of shareholders. Within 20 days after the relevant resolution is passed at such meeting, the dissenting shareholders must make a request to us in writing to purchase their shares. We are obligated to purchase the shares of dissenting shareholders no later than one month after the end of such 20-day period. The purchase price for the shares is required to be determined through negotiation between the dissenting shareholders and us. If we cannot agree on a price through negotiation, the purchase price will be the average of (1) the weighted average of the daily closing prices of shares on the Korea Exchange for the two-month period before the date of the adoption of the relevant board resolution and (3) the weighted average of the daily closing price of shares on the Korea Exchange for the one-month period before the date of the adoption of the relevant board resolution and (3) the weighted average of the daily closing price of shares on the Korea Exchange for the one-week period before the date of the adoption of the relevant board resolution. If we or the dissenting shareholders that had requested the purchase of their shares do not accept the purchase price, we or the dissenting shareholders may request a court to determine the purchase price. Holders of ADSs will not be able to exercise dissenter's rights unless they have withdrawn the underlying common stock and become our direct shareholders.

Register of Shareholders and Record Dates

Our transfer agent, Korea Securities Depository, maintains the register of our shareholders at its office in Seoul, Korea. It will register transfers of shares on the register of shareholders on presentation of the share certificates.

The record date for annual dividends is December 31. For the purpose of determining the shareholders entitled to annual dividends, the register of shareholders may be closed for the period from January 1 to January 15 of each year. Further, for the purpose of determining the shareholders entitled to some other rights pertaining to the shares, we may, on at least two weeks' public notice, set a record date and/or close the register of shareholders for not more than three months.

Business Report

At least one week before the annual general meeting of shareholders, we must make our business report and audited consolidated Korean IFRS financial statements available for inspection at our principal office and at all of our branch offices. In addition, copies of business reports, the audited consolidated Korean IFRS financial statements and any resolutions adopted at the general meeting of shareholders will be available to our shareholders.

Under the Financial Investment Services and Capital Markets Act, we must file with the Financial Services Commission and the Korea Exchange (1) a yearly report (including audited non-consolidated financial statements and audited consolidated financial statements) within 90 days after the end of our fiscal year and (2) interim reports with respect to the three-month period, six-month period and nine-month period from the beginning of each fiscal year within 45 calendar days following the end of each such period. Copies of these reports will be available for public inspection at the Financial Services Commission and the Korea Exchange.

Transfer of Shares

Under the Korean Commercial Code, the transfer of shares is effected by delivery of share certificates. However, to assert shareholders' rights against us, the transferee must have his name and address registered on our register of shareholders. For this purpose, a shareholder is required to file his name, address and seal with us. A non-Korean shareholder may file a specimen signature in place of a seal, unless he is a citizen of a country with a sealing system similar to that of Korea. In addition, a non-resident shareholder must appoint an agent authorized to receive notices on his behalf in Korea and file a mailing address in Korea. The above requirements do not apply to the holders of ADSs.

However, the Electronic Registration Act requires listed securities to be automatically converted into electronic securities as of the business day immediately preceding the effective date of the Electronic Registration Act. The Electronic Registration Act also provides that, with respect to the transfer of electronically registered shares, the effect of transfer will occur upon the completion of the electronic registration of such transfer, and therefore, no entry of change will be required.

Under current Korean regulations, the Korea Securities Depository, foreign exchange banks (including domestic branches of foreign banks), financial investment companies with a dealing, brokerage or collective investment license and internationally recognized custodians may act as agents and provide related services for foreign shareholders. Certain foreign exchange controls and securities regulations apply to the transfer of shares by non-residents or non-Koreans. See "Item 10.D. Exchange Controls."

Acquisition of Shares by Us

Under the Korean Commercial Code, we may acquire our own shares pursuant to a resolution adopted at a general meeting of shareholders through either (i) purchases on a stock exchange or (ii) with respect to shares other than any redeemable shares as set forth in Article 345, Paragraph (1) of the Korean Commercial Code, purchases from each shareholder in proportion to such shareholder's existing shareholding ratio through the methods set forth in the Presidential Decree, provided that the aggregate purchase price does not exceed the amount of our profit that may be distributed as dividends in respect of the immediately preceding fiscal year.

In addition, pursuant to the Financial Investment Services and Capital Markets Act, we may acquire shares through purchases on the Korea Exchange or through a tender offer. We may also acquire interests in our own shares through agreements with trust companies or retrieve our own shares from a trust company upon termination of the trust agreement. The aggregate purchase price for shares purchased through such means may not exceed the total amount available for distribution of dividends at the end of the preceding fiscal year, subject to certain procedural requirements.

Liquidation Rights

In the event of our liquidation, after payment of all debts, liquidation expenses and taxes, our remaining assets will be distributed among shareholders in proportion to their shareholdings. Holders of preferred shares have no preference in liquidation.

Item 10.C. Material Contracts

We have not entered into any material contracts during the two years immediately preceding the date of this annual report, other than in the ordinary course of our business. For information regarding our agreements and transactions with certain related parties, see "Item 7.B. Related Party Transactions." For descriptions of certain agreements related to our capital commitments and obligations and certain agreements related to our joint ventures, which we believe were not material to our results of operations and financial condition in the periods in which such agreements were entered, see "Item 5.B. Liquidity and Capital Resources" and "Item 4.B. Business Overview—Joint Ventures", respectively.

Item 10.D. Exchange Controls

The Foreign Exchange Transaction Act of Korea and the Presidential Decree and regulations under that Act and Decree, which we refer to collectively as the Foreign Exchange Transaction Laws, regulate investments in Korean securities by non-residents and issuances of securities outside Korea by Korean companies. Non-residents may invest in Korean securities pursuant to the Foreign Exchange Transaction Laws. The Financial Services Commission has also adopted, pursuant to its authority under the Financial Investment Services and Capital Markets Act, regulations that restrict investments by foreigners in Korean securities and regulate issuances of securities outside Korea by Korean companies.

Subject to certain limitations, the Ministry of Strategy and Finance has the authority to take the following actions under the Foreign Exchange Transaction Laws:

- if the government deems it necessary on account of war, armed conflict, natural disaster or grave and sudden and significant changes in domestic or foreign economic circumstances or similar events or circumstances, the Ministry of Strategy and Finance may temporarily suspend performance under any or all foreign exchange transactions, in whole or in part, to which the Foreign Exchange Transaction Laws apply (including suspension of payment and receipt of foreign exchange) or impose an obligation to deposit, safe-keep or sell any means of payment to The Bank of Korea or certain other governmental agencies, foreign exchange equalization funds or financial institutions; and
- if the government concludes that the international balance of payments and international financial markets are experiencing or are likely to experience significant disruption or that the movement of capital between Korea and other countries is likely to adversely affect the Korean Won, exchange rates or other macroeconomic policies, the Ministry of Strategy and Finance may take action to require any person who intends to effect a capital transaction to obtain permission or to require any person who effects a capital transaction to deposit a portion of the means of payment acquired in such transactions with The Bank of Korea, foreign exchange equalization funds or financial institutions.

Government Review of Issuance of ADSs

In order for us to issue ADSs outside Korea, we are required to submit a report to the Ministry of Strategy and Finance or our designated foreign exchange bank (depending on the aggregate issue amount) with respect to the issuance of the ADSs. No further governmental approval is necessary for the offering and issuance of the ADSs.

Under current Korean laws and regulations and the terms of the deposit agreement, the depositary is required to obtain our consent for the number of shares of common stock to be deposited in any given proposed deposit that exceeds the difference between:

- (1) the aggregate number of shares of our common stock deposited by us for the issuance of our ADSs (including deposits in connection with the initial issuance and all subsequent offerings of our ADSs and stock dividends or other distributions related to these ADSs); and
- (2) the number of shares of our common stock on deposit with the depositary at the time of such proposed deposit.

We can give no assurance that we would, subject to governmental authorization, grant our consent, if our consent is required. Therefore, a holder of ADRs who surrenders ADRs and withdraws shares may not be permitted subsequently to deposit those shares and obtain ADRs.

Reporting Requirements for Holders of Substantial Interests

Under the Financial Investment Services and Capital Markets Act, any person whose direct or beneficial ownership of our common stock with voting rights, whether in the form of shares of common stock or ADSs, certificates representing the rights to subscribe for shares and equity-related debt securities including convertible bonds, bonds with warrants and exchangeable bonds, which we refer to collectively as equity securities, together with the equity securities directly or beneficially owned by certain related persons or by any person acting in concert with the person, accounts for 5% or more of our total outstanding equity securities, is required to report the status and purpose (in terms of whether the purpose of the shareholding is to participate in the management of the issuer) of the holdings to the Financial Services Commission and the Korea Exchange within five business days after reaching the 5% ownership interest. In addition, any change (i) in the ownership interest subsequent to the report that equals or exceeds 1% of the total outstanding equity securities from the previous report or (ii) in the shareholding purpose, is required to be reported to the Financial Services Commission and the Korea Exchange within five business days from the date of the change (or, in the case of a person with no intent to seek management control or an institutional investor prescribed by the Financial Services Commission, within ten days of the end of the month in which the change occurred).

Violation of these reporting requirements may subject a person to criminal sanctions such as fines or imprisonment and/or prohibition on the exercise of voting rights with respect to the ownership of equity securities exceeding the reported number of shares. Furthermore, the Financial Services Commission may order the disposal of the unreported equity securities.

When a person's shareholding ratio reaches or exceeds ten percent or more of the company's issued and outstanding shares with voting rights, the person must file a report to the Securities and Futures Commission and to the Korea Exchange within five business days following the date on which the person reached such shareholding limit. In addition, such person must file a report to the Securities and Futures Commission and to the Korea Exchange regarding any subsequent change in his/her shareholding. These subsequent reports on changes in shareholding are required within five business days after the relevant change has occurred. Violation of these reporting requirements may subject a person to criminal sanctions such as fines or imprisonment.

Restrictions Applicable to ADSs

No Korean governmental approval is necessary for the sale and purchase of our ADSs in the secondary market outside Korea or for the withdrawal of shares of our common stock underlying the ADSs and the delivery inside Korea of shares in connection with the withdrawal, provided, that a foreigner who intends to acquire the shares must obtain an investment registration card from the Financial Supervisory Service as described below. The acquisition of the shares by a foreigner must be immediately reported to the governor of the Financial Services Commission, either by the foreigner or by his standing proxy in Korea.

Persons who have acquired shares of our common stock as a result of the withdrawal of shares underlying our ADSs may exercise their preemptive rights for new shares, participate in free distributions and receive dividends on shares without any further Korean governmental approval.

Restrictions Applicable to Shares

As a result of amendments to the Foreign Exchange Transaction Laws and Financial Services Commission regulations, adopted in connection with the stock market opening from January 1992, which we refer to collectively as the Investment Rules, after that date, foreigners may invest, with limited exceptions and subject to procedural requirements, in shares of all Korean companies listed on the KRX KOSPI Market or the KRX KOSDAQ Market unless prohibited by specific laws. Foreign investors may trade shares listed on the KRX KOSPI Market or the KRX KOSDAQ Market only through the KRX KOSPI Market or the KRX KOSDAQ Market, except in limited circumstances, including:

- odd-lot trading of shares;
- acquisition of shares, which we refer to as converted shares, by exercise of warrants, conversion rights or exchange
 rights under bonds with warrants, convertible bonds or exchangeable bonds or withdrawal rights under depositary
 receipts issued outside of Korea by a Korean company;
- acquisition of shares as a result of inheritance, donation, bequest or exercise of shareholders' rights, including preemptive rights or rights to participate in free distributions and receive dividends;
- subject to certain exceptions, over-the-counter transactions between foreigners of a class of shares for which the ceiling on aggregate acquisition by foreigners, as explained below, has been reached or exceeded;
- shares acquired by way of direct investment and/or the disposal of such shares by the investor;
- the disposal of shares pursuant to the exercise of appraisal rights of dissenting shareholders;
- the disposal of shares in connection with a tender offer;
- the acquisition of shares by a foreign depositary in connection with the issuance of depositary receipts;
- the acquisition and disposal of shares through an overseas stock exchange market if such shares are simultaneously listed on the KRX KOSPI Market or the KRX KOSDAQ Market and such overseas stock exchange; and
- arm's-length transactions between foreigners, if all of such foreigners belong to the investment group managed by the same person.

For over-the-counter transactions of shares between foreigners outside the KRX KOSPI Market or the KRX KOSDAQ Market for shares with respect to which the limit on aggregate foreign ownership has been reached or exceeded, a financial investment company with a brokerage license in Korea must act as an intermediary. Odd-lot trading of shares outside the KRX KOSPI Market or the KRX KOSDAQ Market must involve a financial investment company with a dealing license in Korea as the other party. Foreign investors are prohibited from engaging in margin transactions by borrowing shares from financial investment companies with respect to shares that are subject to a foreign ownership limit.

The Investment Rules require a foreign investor who wishes to invest in shares on the KRX KOSPI Market or the KRX KOSDAQ Market (including converted shares and shares being issued for initial listing on the KRX KOSPI Market or the KRX KOSDAQ Market) to register its identity with the Financial Supervisory Service prior to making any such investment unless it has previously registered. However, the registration requirement does not apply to foreign investors who acquire converted shares (including upon conversion of ADSs into shares and upon exercise of conversion rights of convertible bonds) with the intention of selling such converted shares within three months from the date of acquisition of the converted shares. Upon registration, the Financial Supervisory Service will issue to the foreign investor an investment registration card, which must be presented each time the foreign investor opens a brokerage account with a financial investment company with a brokerage license. Foreigners eligible to obtain an investment registration card include foreign nationals who have not been residing in Korea for a consecutive period of six months or more, foreign governments, foreign municipal authorities, foreign public institutions, international financial institutions or similar international organizations, corporations incorporated under foreign laws and any person in any additional category designated by a decree promulgated under the Financial Investment Services and Capital Markets Act. All Korean branch offices of a foreign corporation as a group are treated as a separate foreigner from the offices of the corporation located outside of Korea for the purpose of investment registration. However, a foreign corporation or depositary issuing depositary receipts may obtain one or more investment registration cards in its name in certain circumstances as described in the relevant regulations.

Upon a foreign investor's purchase of shares through the KRX KOSPI Market or the KRX KOSDAQ Market, no separate report by the investor is required because the investment registration card system is designed to control and oversee foreign investment through a computer system. However, a foreign investor's acquisition or sale of shares outside the KRX KOSPI Market or the KRX KOSDAQ Market (as discussed above) must be reported by the foreign investor or his standing proxy to the governor of the Financial Supervisory Service at the time of each such acquisition or sale; provided, however, that a foreign investor must ensure that any acquisition or sale by it of shares outside the KRX KOSPI Market or the KRX KOSDAQ Market in the case of trades in connection with a tender offer, odd-lot trading of shares or trades of a class of shares for which the aggregate foreign ownership limit has been reached or exceeded, is reported to the governor of the Financial Supervisory Service by the financial investment company engaged to facilitate such transaction. A foreign investor may appoint a standing proxy from among the Korea Securities Depository, foreign exchange banks (including domestic branches of foreign banks), financial investment companies with a dealing, brokerage or collective investment license and internationally recognized custodians which will act as a standing proxy to exercise shareholders' rights or perform any matters related to the foregoing activities if the foreign investor does not perform these activities itself. Generally, a foreign investor may not permit any person, other than its standing proxy, to exercise rights relating to its shares or perform any tasks related thereto on its behalf. However, a foreign investor may be exempted from complying with these standing proxy rules with the approval of the governor of the Financial Supervisory Service in cases deemed inevitable by reason of conflict between the laws of Korea and the home country of the foreign investor.

Certificates evidencing shares of Korean companies must be kept in custody with an eligible custodian in Korea. Only the Korea Securities Depository, foreign exchange banks (including domestic branches of foreign banks), financial investment companies with a dealing, brokerage or collective investment license and internationally recognized custodians are eligible to act as a custodian of shares for a non-resident or foreign investor; provided, however, that a foreign investor may have the certificate evidencing shares released from such custody when it is necessary to exercise its rights to such shares or to inspect and confirm the presence of the certificate(s) of such shares. A foreign investor must ensure that its custodian deposits its shares with the Korea Securities Depository. However, a foreign investor may be exempted from complying with this deposit requirement with the approval of the governor of the Financial Supervisory Service in circumstances where compliance with that requirement is made impracticable, including cases where compliance would contravene the laws of the home country of such foreign investor.

Under the Investment Rules, with certain exceptions, foreign investors may acquire shares of a Korean company without being subject to any foreign investment ceiling. As one such exception, unless otherwise stated in their articles of incorporation, designated public corporations are subject to a 40% ceiling on the acquisition of shares by foreigners in the aggregate. Furthermore, an investment by a foreign investor in 10% or more of the outstanding shares with voting rights of a Korean company is defined as a foreign direct investment under the Foreign Investment Promotion Act of Korea. Generally, a foreign direct investment must be reported to the foreign exchange bank designated by the Ministry of Trade, Industry & Energy or the Korea Trade-Investment Promotion Agency prior to such investment (within 30 days from the date of such investment, if the company is listed on the Korea Exchange). The acquisition of shares of a Korean company by a foreign investor may also be subject to certain foreign or other shareholding restrictions in the event that the restrictions are prescribed in a specific law that regulates the business of the Korean company.

Under the Foreign Exchange Transaction Laws, a foreign investor who intends to acquire shares must designate a foreign exchange bank at which he must open a foreign currency account and a Korean Won account exclusively for stock investments. No approval is required for remittance into Korea and deposit of foreign currency funds in the foreign currency account. Foreign currency funds may be transferred from the foreign currency account at the time required to place a deposit for, or settle the purchase price of, a stock purchase transaction to a Korean Won account opened at a financial investment company with a securities dealing or brokerage license. Funds in the foreign currency account may be remitted abroad without any Korean governmental approval.

Dividends on shares of Korean companies are paid in Korean Won. No Korean governmental approval is required for foreign investors to receive dividends on, or the Korean Won proceeds of the sale of, any shares to be paid, received and retained in Korea. Dividends paid on, and the Korean Won proceeds of the sale of, any shares held by a non-resident of Korea must be deposited either in a Korean Won account with the investor's financial investment company or in his Korean Won account. Funds in the investor's Korean Won account may be transferred to his foreign currency account or withdrawn for local living expenses, provided that any withdrawal of local living expenses in excess of a certain amount is reported to the Financial Supervisory Service by the foreign exchange bank at which the Won account is maintained. Funds in the Korean Won account may also be used for future investment in shares or for payment of the subscription price of new shares obtained through the exercise of preemptive rights.

Financial investment companies with a securities dealing, brokerage or collective investment license are allowed to open foreign currency accounts with foreign exchange banks exclusively for accommodating foreign investors' stock investments in Korea. Through these accounts, such financial investment companies may enter into foreign exchange transactions on a limited basis, such as conversion of foreign currency funds and Korean Won funds, either as a counterparty to or on behalf of foreign investors, without the investors having to open their own accounts with foreign exchange banks.

Item 10.E. Taxation

The following summary is based upon the tax laws of the United States and the Republic of Korea as in effect on the date of this annual report, and is subject to any change in U.S. or Korean law that may come into effect after such date. Investors in the shares of common stock or ADSs are advised to consult their own tax advisers as to the United States, Korean or other tax consequences of the purchase, ownership and disposition of such securities, including the effect of any national, state or local tax laws.

Korean Taxation

The following summary of Korean tax considerations applies to you so long as you are not:

- a resident of Korea;
- a corporation having its head office, principal place of business or place of effective management in Korea (i.e., a Korean corporation); or
- engaged in a trade or business in Korea through a permanent establishment or a fixed base to which the relevant income is attributable or with which the relevant income is effectively connected.

Taxation of Dividends on Shares of Common Stock or ADSs

We will deduct Korean withholding tax from dividends (whether in cash or in shares) paid to you at a rate of 22% (including local income surtax). If you are a beneficial owner of the dividends and a qualified resident in a country that has entered into a tax treaty with Korea, you may qualify for a reduced rate of Korean withholding tax. See "—Tax Treaties" below for a discussion of treaty benefits. If we distribute to you free shares representing a transfer of certain capital reserves or asset revaluation reserves into paid-in capital, that distribution may be subject to Korean withholding tax.

Taxation of Capital Gains from Transfer of Shares of Common Stock or ADSs

As a general rule, capital gains earned by non-residents upon transfer of shares of our common stock or ADSs are subject to Korean withholding tax at the lower of (1) 11% (including local income surtax) of the gross proceeds realized or (2) subject to the production of satisfactory evidence of acquisition costs and certain direct transaction costs of the shares or ADSs, 22% (including local income surtax) of the net realized gain, unless exempt from Korean income taxation under the applicable Korean tax treaty with the non-resident's country of tax residence. See "—Tax Treaties" below for a discussion on treaty benefits. Even if you do not qualify for an exemption under a tax treaty, you will not be subject to the foregoing withholding tax on capital gains if you qualify under the relevant Korean domestic tax law exemptions discussed in the following paragraphs.

With respect to shares of our common stock, you will not be subject to Korean income taxation on capital gains realized upon the transfer of such shares through the Korea Exchange if you (1) have no permanent establishment in Korea and (2) did not own or have not owned (together with any shares owned by any entity with which you have a certain special relationship and possibly including the shares represented by the ADSs) 25% or more of our total issued and outstanding shares at any time during the calendar year in which the sale occurs and during the five calendar years prior to the calendar year in which the sale occurs.

Under the Korean tax laws for capital gains recognized or to be recognized from disposition of ADSs, ADSs are viewed as shares of stock for capital gains tax purposes. Accordingly, capital gains from sale or disposition of ADSs are taxed (if taxable) as if such gains are from sale or disposition of shares of our common stock. It should be noted that (i) capital gains earned by you (regardless of whether you have a permanent establishment in Korea) from a transfer of ADSs outside Korea will generally be exempt from Korean income taxation by virtue of the Special Tax Treatment Control Law of Korea, or the STTCL, provided that the issuance of ADSs is deemed to be an overseas issuance under the STTCL, but (ii) in the case where an owner of the underlying shares of stock transfers ADSs after conversion of the underlying shares into ADSs, the exemption under the STTCL described in (i) will not apply. In the case where an owner of the underlying shares of stock transfers the ADSs after conversion of the underlying shares of stock into ADSs, such person is obligated to file corporate income tax returns and pay tax unless a purchaser or a financial investment company with a brokerage license, as applicable, withholds and pays the tax on capital gains derived from transfer of ADSs, as discussed below.

If you are subject to tax on capital gains with respect to the sale of ADSs, or of shares of common stock which you acquired as a result of a withdrawal, the purchaser or, in the case of the sale of shares of common stock on the Korea Exchange or through a financial investment company with a brokerage license in Korea, the financial investment company, is required to withhold Korean tax from the sales price in an amount equal to the lower of (i) 11% (including local income surtax) of the gross realization proceeds and (ii) subject to the production of satisfactory evidence of acquisition costs and certain direct transaction costs of the shares or ADSs, 22% (including local income surtax) of the net realized gain, and to make payment of these amounts to the Korean tax authority, unless you establish your entitlement to an exemption under an applicable tax treaty or domestic tax law. See the discussion under "—Tax Treaties" below for an additional explanation of claiming treaty benefits.

Tax Treaties

Korea has entered into a number of income tax treaties with other countries, including the United States, which reduce or exempt Korean withholding tax on dividend income and capital gains on transfer of shares of common stock or ADSs. For example, under the Korea-U.S. income tax treaty, reduced rates of Korean withholding tax on dividends of 16.5% or 11%, respectively (including local income surtax), depending on your shareholding ratio, and an exemption from Korean withholding tax on capital gains are available to residents of the United States that are beneficial owners of the relevant dividend income or capital gains. However, under Article 17 (Investment or Holding Companies) of the Korea-U.S. income tax treaty, such reduced rates and exemption do not apply if (1) you are a U.S. corporation, (2) by reason of any special measures, the tax imposed on you by the United States with respect to such dividends or capital gains is substantially less than the tax generally imposed by the United States on corporate profits, and (3) 25% or more of your capital is held of record or is otherwise determined, after consultation between competent authorities of the United States and Korea, to be owned directly or indirectly by one or more persons who are not individual residents of the United States. Also, under Article 16 (Capital Gains) of the Korea-U.S. income tax treaty, the exemption on capital gains does not apply if you are an individual, and (a) you maintain a fixed base in Korea for a period or periods aggregating 183 days or more during the taxable year and your ADSs or shares of common stock giving rise to capital gains are effectively connected with such fixed base or (b) you are present in Korea for a period or periods of 183 days or more during the taxable year. You should inquire for yourself whether you are entitled to the benefit of an income tax treaty with Korea. It is the responsibility of the party claiming the benefits of an income tax treaty in respect of dividend payments or capital gains to submit to us, the purchaser or the financial investment company, as applicable, a certificate as to his tax residence. In the absence of sufficient proof, we, the purchaser or the financial investment company, as applicable, must withhold tax at the normal rates.

Furthermore, in order for you to claim the benefit of a tax rate reduction or tax exemption on certain Korean source income (e.g., dividends and capital gains) under an applicable tax treaty, subject to certain exceptions, Korean tax law requires you (or your agent) as the beneficial owner of such Korean source income to submit the relevant application (Application for Entitlement to Reduced Tax Rate or Application for Tax Exemption, as the case may be) along with a certificate of your tax residency issued by a competent authority of your country of tax residence ("BO Application"). Such application should be submitted to the withholding agent prior to the payment date of such Korean source income. Subject to certain exceptions, where the Korean source income is paid to an overseas investment vehicle that is not the beneficial owner of such income ("OIV"), a beneficial owner claiming the benefit of an applicable tax treaty with respect to the Korean source income must submit its BO application to such OIV, which must submit an OIV report and a schedule of beneficial owners to the withholding agent prior to the payment date of such Korean source income. In the case of an application for tax exemption, the withholding agent is required to submit the application (together with the applicable OIV report in the case of income paid to an OIV) to the relevant district tax office by the ninth day of the month following the date of the payment of such income.

Inheritance Tax and Gift Tax

If you die while holding an ADS or donate an ADS, it is unclear whether, for Korean inheritance and gift tax purposes, you will be treated as the owner of the shares of common stock underlying the ADSs. If the tax authority interprets depositary receipts as the underlying share certificates, you may be treated as the owner of the shares of common stock and your heir or the donee (or in certain circumstances, you as the donor) will be subject to Korean inheritance or gift tax presently at the rate of 10% to 50% based on the value of the ADSs or shares of common stock and the identity of the individual against whom the tax is assessed.

If you die while holding a share of common stock or donate a share of common stock, your heir or donee (or in certain circumstances, you as the donor) will be subject to Korean inheritance or gift tax at the same rate as indicated above.

At present, Korea has not entered into any tax treaty relating to inheritance or gift taxes.

Securities Transaction Tax

If you transfer shares of common stock on the Korea Exchange, you will be subject to securities transaction tax at the rate of 0.15% and an agriculture and fishery special surtax at the rate of 0.15% of the sale price of the shares of common stock. If your transfer of the shares of common stock is not made on the Korea Exchange, subject to certain exceptions, you will be subject to a securities transaction tax at the rate of 0.5% and will not be subject to an agriculture and fishery special surtax.

Depositary receipts, which the ADSs constitute, are included in the scope of securities the transfers of which are subject to securities transaction tax. However, transfer of depositary receipts listed on a foreign securities exchange similar to that of Korea (e.g., the New York Stock Exchange or the Nasdaq Stock Market) will not be subject to the securities transaction tax.

In principle, the securities transaction tax, if applicable, must be paid by the transfer of the shares or certain rights including rights to subscribe to each shares. When the transfer is effected through a securities settlement company, such settlement company is generally required to withhold and pay the tax to the tax authorities. When such transfer is made through a financial investment company only, such financial investment company is required to withhold and pay the tax. Where the transfer is effected by a non-resident without a permanent establishment in Korea, other than through a securities settlement company or a financial investment company, the transferee is required to withhold the securities transaction tax.

Non-reporting or under-reporting of securities transaction tax will generally result in penalties equal to 20% to 60% of the non-reported tax amount or 10% to 60% of the under-reported tax amount, respectively. Also, a failure to timely pay securities transaction tax will result in a penalty equal to 9.125% per annum of the due but unpaid tax amount. The penalties are imposed on the party responsible for paying the securities transaction tax or, if such tax is required to be withheld, on the party that has the obligation to withhold.

United States Taxation

This summary describes certain material U.S. federal income tax consequences for a U.S. holder (as defined below) of acquiring, owning, and disposing of shares of common stock or ADSs. This summary applies to you only if you hold shares of common stock or ADSs as capital assets for tax purposes. This summary does not apply to you if you are a member of a class of holders subject to special rules, such as:

- a dealer in securities or currencies;
- a trader in securities that elects to use a mark-to-market method of accounting for securities holdings;
- a bank or financial institution;
- a life insurance company;
- a tax-exempt organization;
- an entity treated as a partnership (and partners therein) or other pass-through entity for U.S. federal income tax purposes;
- a person that holds shares of common stock or ADSs that are a hedge or that are hedged against interest rate or currency risks;
- a person that holds shares of common stock or ADSs as part of a straddle or conversion transaction for tax purposes;
- a person whose functional currency for tax purposes is not the U.S. dollar; or
- a person that owns or is deemed to own 10% or more of our stock (by vote or by value).

This summary is based on the Internal Revenue Code of 1986, as amended, its legislative history, existing and proposed regulations promulgated thereunder, published rulings and court decisions, all as currently in effect. These laws are subject to change, possibly on a retroactive basis.

In addition, this summary does not discuss the application of the Medicare net investment income tax or the alternative minimum tax. Please consult your own tax advisers concerning the consequences of purchasing, owning, and disposing of shares of common stock or ADSs in your particular circumstances, including the possible application of state, local, non-U.S. or other tax laws.

For purposes of this summary, you are a "U.S. holder" if you are a beneficial owner of a share of common stock or an ADS and you are:

- a citizen or resident of the United States;
- a U.S. domestic corporation; or
- otherwise subject to U.S. federal income tax on a net income basis with respect to income from the share of common stock or ADS.

In general, if you are the beneficial owner of ADSs, you will be treated as the beneficial owner of the common stock represented by those ADSs for U.S. federal income tax purposes, and no gain or loss will be recognized if you exchange an ADS for the common stock represented by that ADS.

Dividends

The gross amount of cash dividends that you receive (prior to deduction of Korean taxes) generally will be subject to U.S. federal income taxation as foreign source dividend income. Dividends paid in Korean Won will be included in your income in a U.S. dollar amount calculated by reference to the exchange rate in effect on the date that you receive the dividend (or the date of the depositary's receipt of the dividend, in the case of ADSs), regardless of whether the payment is in fact converted into U.S. dollars. If such a dividend is converted into U.S. dollars on the date of receipt, you generally should not be required to recognize foreign currency gain or loss in respect of the dividend income.

Subject to certain exceptions for short-term (60 days or less) and hedged positions, the U.S. dollar amount of "qualified dividends" received by an individual U.S. holder in respect of ADSs generally will be subject to taxation at a lower rate than other ordinary income. Dividends paid on the ADSs will be treated as qualified dividends if (i) the ADSs are readily tradable on an established securities market in the United States and (ii) we were not, in the year prior to the year in which the dividend was paid, and are not, in the year in which the dividend is paid, a passive foreign investment company (a "PFIC"). The ADSs are listed on the New York Stock Exchange and will qualify as readily tradable on an established securities market in the United States so long as they are so listed. Based on our audited financial statements and relevant market and shareholder data, we believe that we were not treated as a PFIC for U.S. federal income tax purposes with respect to our 2018 taxable year. In addition, based on our current expectations regarding the value and nature of our assets, the sources and nature of our income, and relevant market and shareholder data, we do not anticipate becoming a PFIC for our 2019 taxable year.

Distributions of additional shares in respect of shares of common stock or ADSs that are made as part of a pro-rata distribution to all of our shareholders generally will not be subject to U.S. federal income tax, unless you have the right to receive cash or property, in which case you will be treated as if you received cash equal to the fair market value of the distribution.

Sale or Other Disposition

For U.S. federal income tax purposes, gain or loss you realize on the sale or other disposition of shares of common stock or ADSs will be treated as U.S. source capital gain or loss, and will be long-term capital gain or loss if the shares of common stock or ADSs were held for more than one year. Your ability to offset capital losses against ordinary income is limited. Long-term capital gain recognized by an individual U.S. holder generally is subject to taxation at a reduced rate.

Foreign Tax Credit Considerations

You should consult your own tax advisers to determine whether you are subject to any special rules that limit your ability to make effective use of foreign tax credits, including the possible adverse impact of failing to take advantage of benefits under the income tax treaty between the United States and Korea. If no such rules apply, you may claim a credit against your U.S. federal income tax liability for Korean taxes withheld from cash dividends on the shares of common stock or ADSs, so long as you have owned the shares of common stock or ADSs (and not entered into specified kinds of hedging transactions) for at least a 16-day period that includes the ex-dividend date. Instead of claiming a credit, you may, at your election, deduct such Korean taxes in computing your taxable income, subject to generally applicable limitations under U.S. tax law. Foreign tax credits will not be allowed for withholding taxes imposed in respect of certain short-term or hedged positions in securities and may not be allowed in respect of arrangements in which a U.S. holder's expected economic profit is insubstantial.

Any Korean securities transaction tax or agriculture and fishery special surtax that you pay will not be creditable for foreign tax credit purposes.

The calculation of foreign tax credits and, in the case of a U.S. holder that elects to deduct foreign taxes, the availability of deductions involve the application of complex rules that depend on a U.S. holder's particular circumstances. You should consult your own tax advisers regarding the creditability or deductibility of such taxes.

Specified Foreign Financial Assets

Certain U.S. holders that own "specified foreign financial assets" with an aggregate value in excess of US\$50,000 are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. "Specified foreign financial assets" include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer (which would include shares of common stock or ADSs) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. U.S. holders who fail to report the required information could be subject to substantial penalties. Prospective investors should consult their own tax advisors concerning the application of these rules to their investment in shares of common stock or ADSs, including the application of the rules to their particular circumstances.

U.S. Information Reporting and Backup Withholding Rules

Payments of dividends and sales proceeds that are made within the United States or through certain U.S. related financial intermediaries are subject to information reporting and may be subject to backup withholding unless the holder (i) establishes that it is a corporation or other exempt recipient or (ii) provides a taxpayer identification number and certifies that no loss of exemption from backup withholding has occurred.

Holders that are not U.S. persons generally are not subject to information reporting or backup withholding. However, such a holder may be required to provide a certification of its non-U.S. status in connection with payments received within the United States or through a U.S. related financial intermediary.

Item 10.F. Dividends and Paying Agents

Not applicable.

Item 10.G. Statements by Experts

Not applicable.

Item 10.H. Documents on Display

We are subject to the information requirements of the Exchange Act and, in accordance therewith, are required to file reports, including annual reports on Form 20-F, and other information with the SEC. These materials, including this annual report and the exhibits thereto, may be inspected and copied at the SEC's public reference rooms in Washington, D.C., New York, New York and Chicago, Illinois. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. As a foreign private issuer, we are also required to make filings with the SEC by electronic means. Any filings we make electronically will be available to the public over the Internet at the SEC's web site at http://www.sec.gov.

Item 10.I. Subsidiary Information

Not applicable.

Item 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Overview

Market risk is the risk of loss related to adverse changes in market prices, including interest rates and foreign exchange rates, of financial instruments. We are exposed to various financial market risks in our ordinary course of business transactions, primarily from changes in interest rates and foreign exchange rates, and we utilize financial derivatives to mitigate these risks. We also used various derivative instruments, principally forward contracts with maturities of one year or less, to manage our exposure associated with net asset and liability positions and cash flows denominated in foreign currencies. We have used, and intend to continue to use, these financial derivatives only for hedging purposes and not for speculative purposes.

Our primary market risk exposures relate to interest rate movements on floating rate borrowings and exchange rate movements on foreign currency denominated accounts receivable, as well as foreign currency denominated future cash flows from sales, mostly denominated in U.S. dollars and foreign currency denominated accounts payable for purchases of raw materials and supplies, primarily denominated in U.S. dollars and Japanese Yen. The fair value of our financial instruments has been determined as the price, as of the applicable measurement date, that we would receive when selling an asset or that we would pay when transferring a liability, in an orderly transaction between market participants. Fair value is based on quoted market prices where available.

For a further discussion of our market risk and fair value of our financial assets and liabilities, see Note 26 of the notes to our financial statements.

Interest Rate Risks

Our exposure to interest rate risks relates primarily to our long-term debt obligations, which are typically incurred to fund capital expenditures and repay maturing debt, as well as for working capital and other general corporate purposes. As of December 31, 2018, we had outstanding long-term debt, including current portion, in the amount of \(\prec{\psi} 8,572\) billion (US\$7,703\) million).

From time to time, we may enter into interest rate swap contracts to hedge against the effects of interest rate fluctuations of certain of our floating rate long-term debt. As of December 31, 2018, we did not have any outstanding interest rate swap contracts.

We may be exposed to interest rate risks on additional debt financing that we may periodically undertake to fund capital expenditures required for our capacity expansion. Upward fluctuations in interest rates increase the cost of new debt. The interest rate that we will be able to obtain in a new debt financing will depend on market conditions at that time and may differ from the rates we have secured on our current debt.

As of December 31, 2018, we had US\$2,262 million aggregate principal amount of U.S. dollar denominated long-term loans and RMB5,198 million aggregate principal amount of RMB denominated long-term loans. The interest rates on these loans are set based on three-month U.S. dollar LIBOR plus 0.75% to 2.00% and 90% to 105% of the rate published by the People's Bank of China, as applicable. The table below provides information about our financial instruments that are sensitive to changes in interest rates. The risk associated with fluctuating interest expense is principally limited to our U.S. dollar denominated and RMB denominated term loans, and we do not believe that a near-term 10% change of the effective interest rate would have a significant impact on our cash flows.

	Expected Maturity Dates						Fair Value at December 31,		
	2019	2020	2021	2022 Won, except fo	2023 r interest rate n	Thereafter percentages)	Total	2018	
Long-term debt obligations			(2 0.	,, on, encepe io	- 11101 031 1 110 р	er centinges)			
Fixed rate (₩)	₩ 560.7	₩1,048.0	₩ 1,237.6	₩ 645.1	₩ 865.1	₩ 354.8	₩ 4,711.3	₩ 4,790.3	
Average interest rate	2.45%	2.43%	2.64%	2.82%	3.06%	3.38%			
Variable rate (W)	₩ 150.0	_	_	_	_	_	₩ 150.0	W 150.0	
Average interest rate	2.54%	_	_	_	_	_			
Variable rate (RMB)	₩ 211.3	_	_	₩ 105.8	₩ 105.8	₩ 423.2	₩ 846.0	W 846.0	
Average interest rate	4.28%	_		5.15%	5.15%	5.15%			
Fixed rate (US\$)		_	₩ 335.4	_	₩ —	_	₩ 335.4	₩ 351.4	
Average interest rate	_	_	3.88%	_	_	_			
Variable rate (US\$)	₩ 632.3	₩ 157.4	₩ 338.8	₩ 695.7	₩ 444.1	₩ 260.9	₩ 2,529.2	₩ 2,529.2	
Average interest rate	3.91%	3.61%	3.67%	3.98%	3.83%	3.93%			

For a further discussion of our interest rate risk exposures, including a further sensitivity analysis on our interest rate risk exposures, see Notes 11 and 26 of the notes to our financial statements.

Foreign Currency Risk

The primary foreign currency to which we are exposed is the U.S. dollar. We are also exposed, to a lesser extent, to other foreign currencies, including the Chinese Renminbi, the Japanese Yen and the Euro. As of December 31, 2018, we had U.S. dollar denominated sales-related trade accounts and notes receivable of US\$2,175 million, which represented approximately 86% of our trade accounts and notes receivable, and U.S. dollar denominated sales-related trade accounts payable of US\$863 million, which represented approximately 31% of our trade accounts payable.

As of December 31, 2018, we also had RMB denominated sales-related trade accounts and notes receivable of RMB1,098 million, which represented approximately 6% of our trade accounts and notes receivable, net, and Japanese Yen denominated sales-related trade accounts and notes receivable of ¥7 million. In addition, we had RMB denominated sales-related trade accounts payable of RMB2,862 million and Japanese Yen denominated sales-related trade accounts payable of ¥12,501 million, which represented approximately 15% and 4% of our trade accounts and notes payable, net, respectively.

From time to time, we hedge against the effect of exchange rate fluctuations of the U.S. dollar against the Korean Won on our U.S. dollar debt exposure using cross-currency swap contracts. As of December 31, 2018, US\$780 million of our US\$1,155 million aggregate principal amount of U.S dollar denominated floating rate long-term borrowings were hedged against foreign exchange rate and interest rate fluctuations through cross-currency swap contracts.

Cross Currency Interest Rate Swap Contracts:

Contracts to sell Korean (Won)/buy US\$:

Aggregate contract amount	US\$	780 million
Average contractual exchange rate	(Won)	1,127.44/US\$
Change in fair value	(Won)	(12.7) billion

In addition to relying on natural hedges created by foreign currency payables and receivables, we enter into short-term foreign currency forward contracts with major financial institutions to minimize the impact of foreign currency fluctuations on our results of operations. Gains and losses on foreign currency forward contracts are recorded in the period of the exchange rate changes as foreign exchange gain or loss or other comprehensive income. As of December 31, 2018, we did not have any outstanding foreign currency forward contracts.

Based on our overall foreign currency exposure as of December 31, 2018, a short-term 10% appreciation or depreciation of the U.S. dollar against the Korean Won may have a material effect on our short-term financial condition, results of operations or cash flows.

For a further discussion of our foreign currency risk exposures, including a sensitivity analysis on our currency risk exposures, see Note 26 of the notes to our financial statements.

Other Risks

We are exposed to credit risk in the event of non-performance by the counterparties under our foreign currency forward contracts at maturity. In order to minimize this risk, we limit the transaction amount with any one party and continually monitor the credit quality of the counterparties to these financial instruments. We do not anticipate any material losses from these contracts, and we believe the risk of non-performance by the counterparties under these contracts is remote.

A substantial portion of our sales is attributable to a limited number of our end-brand customers. Our top ten end-brand customers, including our largest shareholder as an end-brand customer, together accounted for a substantial majority of our sales in each of 2016, 2017 and 2018. While we negotiate directly with our end-brand customers concerning the price and quantity of the sales, for some sales transactions we invoice the end-brand customers' designated system integrators. In addition, a portion of our sales to end-brand customers and their system integrators located in certain regions are sold through LG International's overseas subsidiaries. Although our sales to LG International and its subsidiaries only accounted for 2.9% of our sales in 2018, in the past we have sold a significantly greater amount to these entities. As a result of our significant dependence on a concentrated group of end-brand customers and their designated system integrators, as well a significant amount of sales we may make to our affiliated trading company, LG International, and its subsidiaries, we are exposed to credit risks associated with these entities. We have established certain measures, such as factoring arrangements and requirement of credit insurance from customers, to protect us from excessive exposure to such credit risks.

We manage our accounts receivable and credit exposure to customers by establishing credit limits for each customer to whom we supply products on an open account basis in accordance with our internal credit guidelines. We assess credit risk through quantitative and qualitative analysis, and based on this analysis, we establish credit limits and determine whether we will seek to use one or more credit support devices, such as obtaining some form of third-party guaranty or stand-by letter of credit, obtaining credit insurance or through factoring of all or part of accounts receivables. Our credit policy does not require credit limits on accounts receivable created on letters of credit. To date, we have not experienced any material problems relating to customer payments. For a further discussion of our credit risk exposures, see Note 26 of the notes to our financial statements.

According to the Korean Statistical Information Service, the rate of inflation in Korea was 1.0% in 2016, 1.9% in 2017 and 1.5% in 2018. Inflation has not had a material impact on our results of operations in recent years.

Item 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Fees and Charges

Under the terms of the deposit agreement, as a holder of our ADSs, you are required to pay the following service fees to the depositary:

Services	Fees
Issuance of ADSs	Up to US\$0.05 per ADS issued
Cancellation of ADSs	Up to US\$0.05 per ADS canceled
Distribution of cash dividends or other cash distributions	Up to US\$0.02 per ADS held
Distribution of ADSs pursuant to (i) stock dividends or other free stock distributions or (ii) exercise of rights to purchase additional ADSs	Up to US\$0.02 per ADS held
Distribution of securities other than ADSs or rights to purchase additional ADSs	Up to US\$0.05 per ADS held
Other ADS services	Up to US\$0.02 per ADS held

As a holder of our ADSs, you are also responsible for paying certain fees and expenses incurred by the depositary and certain taxes and governmental charges such as the following:

- Fees for the transfer and registration of shares charged by the registrar and transfer agent for the shares in Korea (i.e., upon deposit and withdrawal of shares).
- Expenses incurred for converting foreign currency into U.S. dollars.
- Expenses for cable, telex and fax transmissions and for delivery of securities.
- Taxes and duties upon the transfer of securities (i.e., when shares are deposited or withdrawn from deposit).
- Fees and expenses incurred in connection with the delivery or servicing of shares on deposit.

Depositary fees payable upon the issuance and cancellation of ADSs are typically paid to the depositary by the brokers (on behalf of their clients) receiving the newly issued ADSs from the depositary and by the brokers (on behalf of their clients) delivering the ADSs to the depositary for cancellation. The brokers in turn charge these fees to their clients. Depositary fees payable in connection with distributions of cash or securities to ADS holders and the depositary services fee are charged by the depositary to the holders of record of ADSs as of the applicable ADS record date.

The depositary fees payable for cash distributions are deducted from the cash being distributed. In the case of distributions other than cash (i.e., stock dividend, rights), the depositary charges the applicable fee to the ADS record date holders concurrent with the distribution. In the case of ADSs registered in the name of the investor (whether certificated or uncertificated in direct registration), the depositary sends invoices to the applicable record date ADS holders. In the case of ADSs held in brokerage and custodian accounts (via the Depository Trust Company, or DTC), the depositary collects its fees through the systems provided by DTC (whose nominee is the registered holder of the ADSs held in DTC) from the brokers and custodians holding ADSs in their DTC accounts. The brokers and custodians who hold their clients' ADSs in DTC accounts in turn charge their clients' accounts the amount of the fees paid to the depositary.

In the event of refusal to pay the depositary fees, the depositary may, under the terms of the deposit agreement, refuse the requested service until payment is received or may set off the amount of the depositary fees from any distribution to be made to such holder of ADSs.

Note that the fees and charges you may be required to pay may vary over time and may be changed by us and by the depositary. You will receive prior notice of such changes.

Fees and Payments from the Depositary to Us

In 2018, we received the following payments, after deduction of applicable U.S. taxes, from the depositary:

Reimbursement of proxy process expenses (printing, postage and distribution)

US\$ 56,607.25

Contributions towards our investor relations efforts (i.e. non-deal roadshows, investor conferences and IR agency fees) and legal expenses incurred in connection with the preparation of our Form 20-F for the fiscal year 2017

US\$750.029.45

PART II

Item 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

Not applicable.

Item 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS Not applicable.

Item 15. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management has evaluated, with the participation of our chief executive officer and chief financial officer, the effectiveness of our disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of December 31, 2018. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon our evaluation, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were effective as of such date. Our disclosure controls and procedures are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and that it is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) under the Exchange Act. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our financial statements would be prevented or detected. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2018. The effectiveness of our internal control over financial reporting as of December 31, 2018 has been audited by our independent registered public accounting firm, as stated in its attestation report which is included in Item 18 of this Form 20-F.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting during 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 16. [RESERVED]

Item 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our board of directors has determined that Sung Sik Hwang qualifies as an "audit committee financial expert" and is independent within the meaning of this Item 16A.

Item 16B. CODE OF ETHICS

We have adopted a code of ethics, as defined in Item 16B of Form 20-F under the Exchange Act. Our Code of Ethics applies to our chief executive officer, chief financial officer and persons performing similar functions as well as to our non-executive directors and other officers and employees. Our Code of Ethics is available on our website at www.lgdisplay.com. If we amend the provisions of our Code of Ethics that apply to our chief executive officer and chief financial officer and persons performing similar functions, or if we grant any waiver of such provisions, we will disclose such amendment or waiver on our website at the same address.

Item 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth the fees billed to us by our independent registered public accounting firm, KPMG Samjong Accounting Corp., a member firm of KPMG International, and their respective affiliates, which we collectively refer to as KPMG, during the fiscal years ended December 31, 2017 and 2018:

	Year ended Decei	December 31,	
	2017	2018	
	(in millions of	Won)	
Audit fees	₩ 3,064 ¥	¥ 3,956	
Tax fees	98	96	
All other fees	31	50	
Total fees	₩ 3,193 ¥	¥ 4,102	

Audit fees in the above table are the fees billed by KPMG in connection with the audit of our annual financial statements and the review of our interim financial statements.

Tax fees in the above table are fees billed by KPMG for tax compliance services and other tax advice.

All other fees for 2017 in the above table are the aggregate fees billed by KPMG for services related to information security trends of global enterprises and the utilization of such trend information for benchmarking purposes and all other fees for 2018 in the above table are the aggregate fees billed by KPMG for services related to the issuance of an assurance report in connection with our issuance of foreign currency-denominated bonds.

Audit Committee Pre-Approval Policies and Procedures

Our audit committee has not established pre-approval policies and procedures for the engagement of our independent auditors for services. Our audit committee expressly approves on a case-by-case basis any engagement of our independent auditors for audit and non-audit services provided to our subsidiaries or to us.

The audit committee is permitted to approve certain fees for audit and non-audit services before the completion of the engagement that are recurring, in the ordinary course of business and otherwise comply with the de minimis exception to the applicable rules of the SEC. In 2018, no fees were approved pursuant to the *de minimis* exception.

Item 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.

PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS Item 16E.

Neither we nor any "affiliated purchaser," as defined in Rule 10b-18(a)(3) of the Exchange Act, purchased any of our equity securities during the period covered by this annual report.

Item 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

Item 16G. CORPORATE GOVERNANCE

The following is a summary of the significant differences between the New York Stock Exchange's corporate governance standards and those that we follow under Korean law.

NYSE Corporate Governance Standards	LG Display's Corporate Governance Practice
Director Independence	

Listed companies must have a majority of independent directors.

defined in accordance with the New York Stock Exchange's standards), as four out of seven directors are outside directors. **Nomination/Corporate Governance Committee**

Listed companies must have a nomination/corporate governance committee composed entirely of independent directors. The committee must have a charter that addresses the purpose, responsibilities (including development of corporate governance guidelines) and annual performance evaluation of the committee. Although we have not established a separate nomination/corporate governance committee, we maintain an Outside Director Nomination Committee composed of two outside directors and one non-outside director.

The majority of our board of directors is independent (as

Compensation Committee

Listed companies must have a compensation committee composed entirely of independent directors. The committee must have a charter that addresses the purpose, responsibilities and annual performance evaluation of the committee. The charter must be made available on the company's website. In addition, in accordance with the U.S. Securities and Exchange Commission rules adopted pursuant to Section 952 of the Dodd-Frank Act, the New York Stock Exchange listing standards were amended to expand the factors relevant in determining whether a committee member has a relationship with the company that will materially affect that member's duties to the compensation committee.

Under Korean law, we are not required to establish a compensation committee. Accordingly, we do not currently have a compensation committee, and our board of directors is directly responsible for matters relating to salaries and incentive compensation for our directors and executive officers.

Executive Session

Non-management directors of listed companies must meet in regularly scheduled executive sessions without management. Independent directors should meet alone in an executive session at least once a year.

We do not normally hold executive sessions solely attended by non-management directors as that is not required under Korean law but we may elect to do so at the discretion of the directors.

Audit Committee

Listed companies must have an audit committee that satisfies the requirements of Rule 10A-3 under the Exchange Act. All members must be independent. The committee must have a charter addressing the committee's purpose, an annual performance evaluation of the committee, and the duties and responsibilities of the committee. The charter must be made available on the company's website.

We maintain an Audit Committee composed of three outside directors who meet the applicable independence criteria set forth under Rule 10A-3 of the Exchange Act.

Audit Committee Additional Requirements

Listed companies must have an audit committee that is composed of at least three directors.

Our Audit Committee has three directors, as described above.

Shareholder Approval of Equity Compensation Plan

Listed companies must allow its shareholders to exercise their voting rights with respect to any material revision to the company's equity compensation plan.

We currently have two equity compensation plans: one providing for the grant of stock options to officers and key employees and an Employee Stock Ownership Plan, or ESOP.

Stock options to officers and key employees may be granted pursuant to a resolution of the shareholders in an amount not to exceed 15% of the total number of our issued and outstanding shares. However, the board of directors may grant stock options to non-director officers and employees up to 1% of the total number of our issued and outstanding shares, which grant must be approved by a resolution of the subsequent general meeting of shareholders.

All material matters related to the granting of stock options are provided in our articles of incorporation, and any amendments to the articles of incorporation are subject to shareholders' approval. Matters related to the ESOP are not subject to shareholders' approval under Korean law.

Shareholder Approval of Equity Offerings

Listed companies must allow its shareholders to exercise their voting rights with respect to equity offerings that do not qualify as public offerings for cash, and offerings of equity of related parties.

The Korean Commercial Code and our articles of incorporation provide that any and all terms and conditions for the issuance of new shares of the company shall be determined by a resolution of the board of directors. The company may allot new shares by a resolution of the board of directors to persons other than its shareholders when certain requirements are satisfied, including where new shares are issued by way of general public offering, and are issued to corporations, institutional investors, domestic and foreign financial institutions and others to further a management objective such as strengthening the company's financials (provided, however, that such allotment of new shares to persons other than shareholders may only be made up to 20% of the total number of issued and outstanding shares of the company).

Corporate Governance Guidelines

Listed companies must adopt and disclose corporate governance guidelines.

We do not maintain formal corporate governance guidelines. Our board of directors is responsible for overseeing our policies, practices and procedures in the area of corporate governance.

Code of Business Conduct and Ethics

Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers. We have adopted a Code of Ethics for all directors, officers and employees. A copy of our Code of Ethics is available on our website at *www.lgdisplay.com*.

Item 16H. MINE SAFETY DISCLOSURE

Not applicable.

PART III

Item 17. FINANCIAL STATEMENTS

Not applicable.

Item 18. FINANCIAL STATEMENTS

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Item 19. **EXHIBITS**

Number	Description
1.1	Amended and Restated Articles of Incorporation (translation in English)
2.1*	Form of Common Stock Certificate (translation in English) (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement (No. 333-116819) on Form F-1, filed on July 13, 2004)
2.2*	Deposit Agreement (including Form of American Depositary Receipt) (incorporated by reference to Exhibit (a) to the Registrant's Registration Statement (No. 333-147661) on Form F-6, filed on November 28, 2007)
2.3*	Form of Amendment No. 1 to Deposit Agreement (including Form of American Depositary Receipt) (incorporated by reference to Exhibit (a)(i) to the Registration Statement (No. 333-147661) on Post Effective Amendment No. 1 to Form F-6, filed on July 30, 2014)
2.4*	Letter from Citibank, N.A., as depositary, dated as of November 29, 2007, to the Registrant relating to the direct registration system for the American depositary receipts (incorporated by reference to Exhibit 2.3 to the Registrant's Annual Report (No. 001-32238) on Form 20-F, filed on April 16, 2008)
8.1**	List of subsidiaries of LG Display Co., Ltd.
12.1	Section 302 certification of the Chief Executive Officer
12.2	Section 302 certification of the Chief Financial Officer
13.1	Section 906 certification of the Chief Executive Officer
13.2	Section 906 certification of the Chief Financial Officer
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase

Filed previously.

Incorporated by reference to Note 1 of the notes to the consolidated financial statements of LG Display Co., Ltd. included in this annual report.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

LG DISPLAY CO., LTD.

(Registrant)

/s/ SANG BEOM HAN

(Signature)

Name: Sang Beom Han Title: Representative Director, Vice Chairman and

Chief Executive Officer

/s/ DONGHEE SUH

(Signature)

Name: Donghee Suh

Title: Senior Vice President and Chief Financial Officer

Date: April 30, 2019

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Report of Independent Registered Public Accounting Firm

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

Opinions on the Consolidated Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated statements of financial position of LG Display Co., Ltd. and subsidiaries ("the Group") as of December 31, 2017 and 2018, and the related consolidated statements of comprehensive income (loss), changes in equity and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, "consolidated financial statements"). We also have audited the Group's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Group as of December 31, 2017 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Group maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Group's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Group's consolidated financial statements and an opinion on the Group's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG Samjong Accounting Corp.

We have served as the Group's auditor since 2008.

Seoul, Korea April 26, 2019

LG DISPLAY CO., LTD. AND SUBSIDIARIES Consolidated Statements of Financial Position

As of December 31, 2017 and 2018

(In millions of won)	Note	December 31, 2017	December 31, 2018
Assets			
Cash and cash equivalents	4, 26	₩ 2,602,560	2,365,022
Deposits in banks	4, 26	758,078	78,400
Trade accounts and notes receivable, net	5, 15, 26 28	4,325,120	2,829,163
Other accounts receivable, net	5, 26	164,827	169,313
Other current financial assets	6, 26	27,252	46,301
Inventories	7	2,350,084	2,691,203
Prepaid income taxes		3,854	4,516
Non-current assets held for sale	30	_	70,161
Other current assets	5	241,928	546,048
Total current assets		10,473,703	8,800,127
Deposits in banks	4, 26	11	11
Investments in equity accounted investees	8	122,507	113,989
Other non-current accounts receivable, net	5, 26	8,738	11,448
Other non-current financial assets	6, 26	59,836	144,214
Property, plant and equipment, net	9, 17	16,201,960	21,600,130
Intangible assets, net	10, 17	912,821	987,642
Deferred tax assets	24	985,352	1,136,166
Other non-current assets	5	394,759	381,983
Total non-current assets		18,685,984	24,375,583
Total assets		₩ 29,159,687	33,175,710

LG DISPLAY CO., LTD. AND SUBSIDIARIES Consolidated Statements of Financial Position, Continued

As of December 31, 2017 and 2018

(In millions of won)	Note	December 31, 2017		December 31, 2018
Liabilities			_	
Trade accounts and notes payable	26, 28	W	2,875,090	3,087,461
Current financial liabilities	11, 26		1,452,926	1,553,907
Other accounts payable	26		3,169,937	3,566,629
Accrued expenses			812,615	633,346
Income tax payable			321,978	105,900
Provisions	13		76,016	98,254
Advances received	15		194,129	834,010
Other current liabilities	14		75,991	74,976
Total current liabilities			8,978,682	9,954,483
Non-current financial liabilities	11, 26		4,150,192	7,030,628
Non-current provisions	13		28,312	32,764
Defined benefit liabilities, net	12		95,447	45,360
Long-term advances received	15		830,335	1,114,316
Deferred tax liabilities	24		24,646	15,087
Other non-current liabilities	14		70,563	96,826
Total non-current liabilities			5,199,495	8,334,981
Total liabilities			14,178,177	18,289,464
Equity				
Share capital	16		1,789,079	1,789,079
Share premium			2,251,113	2,251,113
Retained earnings			10,621,571	10,239,965
Reserves	16		(288,280)	(300,968)
Total equity attributable to equity holders of the Controlling				
Company			14,373,483	13,979,189
Non-controlling interests			608,027	907,057
Total equity			14,981,510	14,886,246
Total liabilities and equity		₩	29,159,687	33,175,710

See accompanying notes to the consolidated financial statements.

Consolidated Statements of Comprehensive Income (Loss)

For the years ended December 31, 2016, 2017 and 2018

(In millions of won, except earnings per share)	Note	2016	2017	2018
Revenue	17, 28	₩ 26,504,074	27,790,216	24,336,571
Cost of sales	7, 18, 28	(22,754,270)	(22,424,661)	(21,251,305)
Gross profit		3,749,804	5,365,555	3,085,266
Selling expenses	19	(694,914)	(994,483)	(834,062)
Administrative expenses	19	(610,479)	(696,022)	(938,214)
Research and development expenses		(1,133,972)	(1,213,432)	(1,221,198)
Other income	21	1,591,801	1,081,746	1,004,137
Other expenses	21	(1,467,831)	(1,230,455)	(1,115,233)
Finance income	22	139,671	279,019	254,131
Finance costs	22	(266,186)	(268,856)	(326,893)
Equity in income of equity accounted investees, net	8	8,339	9,560	700
Profit (loss) before income tax		1,316,233	2,332,632	(91,366)
Income tax expense	23	(384,725)	(395,580)	(88,077)
Profit (loss) for the year		931,508	1,937,052	(179,443)
Other comprehensive income (loss)				
Items that will never be reclassified to profit or loss				
Remeasurements of net defined benefit liabilities	12, 23	155,346	(16,260)	5,690
Other comprehensive income (loss) from associates and joint ventures		200	441	20
Related income tax	12, 23	(37,594)	9,259	(1,169)
		117,952	(6,560)	4,541

Consolidated Statements of Comprehensive Income (Loss), Continued

For the years ended December 31, 2016, 2017 and 2018

(In millions of won, except earnings per share)	Note	2016	2017	2018
Items that are or may be reclassified to profit or loss				
Net change in fair value of available-for-sale financial assets		(77)		_
Foreign currency translation differences for foreign operations	22, 23	(90,503)	(231,738)	(19,987)
Other comprehensive income (loss) from associates and joint ventures	23	(5,416)	905	37
Related income tax		19	_	—
		(95,977)	(230,833)	(19,950)
Other comprehensive income (loss) for the year, net of income tax		21,975	(237,393)	(15,409)
Total comprehensive income (loss) for the year		₩ 953,483	1,699,659	(194,852)
Profit (loss) attributable to:				
Owners of the Controlling Company		906,713	1,802,756	(207,239)
Non-controlling interests		24,795	134,296	27,796
Profit (loss) for the year		₩ 931,508	1,937,052	(179,443)
Total comprehensive income (loss) attributable to:				
Owners of the Controlling Company		941,953	1,596,394	(215,386)
Non-controlling interests		11,530	103,265	20,534
Total comprehensive income (loss) for the year		₩ 953,483	1,699,659	(194,852)
Earnings (loss) per share (In won)				
Basic earnings (loss) per share	25	W 2,534	5,038	(579)
Diluted earnings (loss) per share	25	₩ 2,534	5,038	(579)

See accompanying notes to the consolidated financial statements.

LG DISPLAY CO., LTD. AND SUBSIDIARIES Consolidated Statements of Changes in Equity

For the years ended December 31, 2016, 2017 and 2018

	Attributable to owners of the Controlling Company						
	Share	Share	Retained			Non-controlling	Total
(In millions of won)	capital	premium	earnings	Reserves	Sub-total	interests	equity
Balances at January 1, 2016	₩ 1,789,079	2,251,113	8,158,526	(5,766)	12,192,952	512,004	12,704,956
Total comprehensive income (loss) for the year							
Profit for the year	_	_	906,713	_	906,713	24,795	931,508
Other comprehensive income (loss)			117,952	(82,712)	35,240	(13,265)	21,975
	₩ —	_	1,024,665	(82,712)	941,953	11,530	953,483
Transaction with owners, recognized directly in equity							
Dividends to equity holders	_	_	(178,908)	_	(178,908)	_	(178,908)
Capital contribution from non-controlling interests						(17,143)	(17,143)
Balances at December 31, 2016	₩ 1,789,079	2,251,113	9,004,283	(88,478)	12,955,997	506,391	13,462,388
Balances at January 1, 2017	₩ 1,789,079	2,251,113	9,004,283	(88,478)	12,955,997	506,391	13,462,388
Total comprehensive income (loss) for the year							
Profit for the year	_	_	1,802,756	_	1,802,756	134,296	1,937,052
Other comprehensive loss			(6,560)	(199,802)	(206,362)	(31,031)	(237,393)
	W —		1,796,196	(199,802)	1,596,394	103,265	1,699,659
Transaction with owners, recognized directly in equity							
Dividends to equity holders	_	_	(178,908)	_	(178,908)	_	(178,908)
Subsidiaries' dividends distributed to non-controlling interests	_	_	_	_	_	(5,929)	(5,929)
Capital contribution from non-controlling interests						4,300	4,300
Balances at December 31, 2017	₩ 1,789,079	2,251,113	10,621,571	(288,280)	14,373,483	608,027	14,981,510

LG DISPLAY CO., LTD. AND SUBSIDIARIES

Consolidated Statements of Changes in Equity, Continued

For the years ended December 31, 2016, 2017 and 2018

	Attributable to owners of the Controlling Company						
	Share	Share	Retained			Non-controlling	Total
(In millions of won)	capital	premium	earnings	Reserves	Sub-total	interests	equity
Balances at January 1, 2018	₩ 1,789,079	2,251,113	10,621,571	(288,280)	14,373,483	608,027	14,981,510
Total comprehensive income (loss) for the year							
Profit (loss) for the year	_	_	(207,239)	_	(207,239)	27,796	(179,443)
Other comprehensive income (loss)			4,541	(12,688)	(8,147)	(7,262)	(15,409)
	₩ —	_	(202,698)	(12,688)	(215,386)	20,534	(194,852)
Transaction with owners, recognized directly in equity							
Dividends to equity holders	_	_	(178,908)	_	(178,908)	_	(178,908)
Subsidiaries' dividends distributed to non-controlling interests	_	_	_	_	_	(53,107)	(53,107)
Capital contribution from non-controlling interests						331,603	331,603
Balances at December 31, 2018	₩ 1,789,079	2,251,113	10,239,965	(300,968)	13,979,189	907,057	14,886,246

See accompanying notes to the consolidated financial statements.

LG DISPLAY CO., LTD. AND SUBSIDIARIES Consolidated Statements of Cash Flows

For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	Note	2016	2017	2018
Cash flows from operating activities:				
Profit (loss) for the year		₩ 931,508	1,937,052	(179,443)
Adjustments for:				
Income tax expense	23	384,725	395,580	88,077
Depreciation	9,18	2,643,445	2,791,883	3,123,659
Amortization of intangible assets	10,18	378,126	422,693	430,906
Gain on foreign currency translation		(250,508)	(187,558)	(84,643)
Loss on foreign currency translation		161,897	174,919	138,452
Expenses related to defined benefit plans	12,20	220,962	198,241	179,880
Gain on disposal of property, plant and equipment		(14,637)	(101,227)	(6,620)
Loss on disposal of property, plant and equipment		7,466	20,030	15,048
Impairment loss on property, plant and equipment		1,610	_	43,601
Impairment loss on inventories		204,123	206,127	313,180
(Reversal of) bad debt expense		(19)	144	(1,155)
Gain on disposal of intangible assets		-	(308)	(239)
Loss on disposal of intangible assets		75	30	
Impairment loss on intangible assets		138	1,809	82
Reversal of impairment loss on intangible assets		_	(35)	(348)
Warranty expenses		166,691	251,131	234,928
Finance income		(58,748)	(202,591)	(101,313)
Finance costs		187,931	142,591	173,975
Equity in income of equity method accounted investees, net	8	(8,339)	(9,560)	(700)
Other income		(15,546)	(16,812)	(3,310)
Other expenses		15,777	1,870	593
		4,956,677	6,026,009	4,364,610

LG DISPLAY CO., LTD. AND SUBSIDIARIES Consolidated Statements of Cash Flows, Continued

For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	ote	2016	2017	2018
Changes in				
Trade accounts and notes receivable	W	(553,756)	484,448	1,306,118
Other accounts receivable		62,981	(3,004)	(56,870)
Inventories		(98,435)	(262,106)	(763,081)
Other current assets		126,616	180,844	(249,968)
Other non-current assets		(126,256)	(119,002)	(61,164)
Trade accounts and notes payable		(114,977)	113,590	267,358
Other accounts payable		66,930	106,930	(111,053)
Accrued expenses		(16,431)	181,509	(194,394)
Provisions		(160,462)	(210,973)	(217,984)
Other current liabilities		17,272	(585)	78,849
Defined benefit liabilities, net		(276,459)	(261,966)	(224,335)
Long-term advances received		_	1,020,470	948,276
Other non-current liabilities		21,641	5,974	24,510
Cash generated from operating activities		3,905,341	7,262,138	5,110,872
Income taxes paid		(187,816)	(416,794)	(486,549)
Interests received		48,911	55,340	71,819
Interests paid		(125,530)	(136,483)	(212,019)
Net cash provided by operating activities	W	3,640,906	6,764,201	4,484,123

Consolidated Statements of Cash Flows, Continued

For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	Note	2016	2017	2018
Cash flows from investing activities:				
Dividends received		₩ 59,820	8,639	5,272
Proceeds from withdrawal of deposits in banks		3,293,398	2,206,148	1,454,561
Increase in deposits in banks		(2,684,810)	(1,803,718)	(775,239)
Acquisition of financial assets at fair value through profit or loss		(1,500)		(431)
Proceeds from disposal of financial assets at fair value through other				
comprehensive income				6
Acquisition of available-for-sale financial assets		(859)	(273)	_
Proceeds from disposal of available-for-sale financial assets		507	917	
Acquisition of investments in equity accounted investees		_	(20,309)	(14,732)
Proceeds from disposal of investments in equity accounted investees		29,745	13,128	4,527
Acquisition of property, plant and equipment		(3,735,948)	(6,592,435)	(7,942,210)
Proceeds from disposal of property, plant and equipment		278,067	160,252	142,088
Acquisition of intangible assets		(405,167)	(454,448)	(480,607)
Proceeds from disposal of intangible assets		261	1,674	960
Government grants received		6,393	1,859	1,210
Receipt from settlement of derivatives		4,008	2,592	2,026
Increase in short-term loans		(2,132)		(7,700)
Proceeds from collection of short-term loans		8,202	1,118	15,968
Increase in long-term loans		(32,498)	(13,930)	(36,580)
Decrease in deposits		2,436	4,272	4,136
Increase in deposits		(9,105)	(2,648)	(58,794)
Proceeds from disposal of emission rights			6,090	10,200
Net cash used in investing activities		₩ (3,189,182)	(6,481,072)	(7,675,339)

LG DISPLAY CO., LTD. AND SUBSIDIARIES Consolidated Statements of Cash Flows, Continued

For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	Note	2016	2017	2018
Cash flows from financing activities:	27			
Proceeds from short-term borrowings		₩ 107,345		552,164
Repayments of short-term borrowings		_	(105,864)	(552,884)
Proceeds from issuance of bonds		597,573	497,959	828,169
Proceeds from long-term borrowings		1,667,060	1,195,415	3,882,958
Repayments of long-term borrowings		(347,693)		_
Repayments of current portion of long-term borrowings and bonds		(1,520,287)	(544,731)	(1,859,098)
Capital contribution from non-controlling interests		_	4,300	331,603
Subsidiaries' dividends distributed to non-controlling interests		(17,143)	(5,929)	(51,085)
Dividends paid		(178,908)	(178,908)	(178,908)
Net cash provided by financing activities		307,947	862,242	2,952,919
Net increase (decrease) in cash and cash equivalents		759,671	1,145,371	(238,297)
Cash and cash equivalents at January 1		751,662	1,558,696	2,602,560
Effect of exchange rate fluctuations on cash held		47,363	(101,507)	759
Cash and cash equivalents at December 31		₩ 1,558,696	2,602,560	2,365,022

See accompanying notes to the consolidated financial statements.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

1. Reporting Entity

(a) Description of the Controlling Company

LG Display Co., Ltd. (the "Controlling Company") was incorporated in February 1985 and the Controlling Company is a public corporation listed in the Korea Exchange since 2004. The main business of the Controlling Company and its subsidiaries (the "Group") is to manufacture and sell displays and its related products. As of December 31, 2018, the Group is operating Thin Film Transistor Liquid Crystal Display ("TFT-LCD") and Organic Light Emitting Diode ("OLED") panel manufacturing plants in Gumi, Paju and China and TFT-LCD and OLED module manufacturing plants in Gumi, Paju, China, Poland and Vietnam. The Controlling Company is domiciled in the Republic of Korea with its address at 128 Yeouidae-ro, Yeongdeungpo-gu, Seoul, the Republic of Korea. As of December 31, 2018, LG Electronics Inc., a major shareholder of the Controlling Company, owns 37.9% (135,625,000 shares) of the Controlling Company's common stock.

The Controlling Company's common stock is listed on the Korea Exchange under the identifying code 034220. As of December 31, 2018, there are 357,815,700 shares of common stock outstanding. The Controlling Company's common stock is also listed on the New York Stock Exchange in the form of American Depository Shares ("ADSs") under the symbol "LPL". One ADS represents one-half of one share of common stock. As of December 31, 2018, there are 20,890,926 ADSs outstanding.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

1. Reporting Entity, Continued

(b) Consolidated Subsidiaries as of December 31, 2018

(In millions)

Subsidiaries	Location	Percentage of ownership	Fiscal year end	Date of incorporation	Business	Capital stocks
LG Display America, Inc.	San Jose, U.S.A.	100%	December 31	September 24, 1999	Sell Display products	USD 411
LG Display Germany GmbH	Eschborn, Germany	100%	December 31	November 5, 1999	Sell Display products	EUR 1
LG Display Japan Co., Ltd.	Tokyo, Japan	100%	December 31	October 12, 1999	Sell Display products	JPY 95
LG Display Taiwan Co., Ltd.	Taipei, Taiwan	100%	December 31	April 12, 1999	Sell Display products	NTD 116
LG Display Nanjing Co., Ltd.	Nanjing, China	100%	December 31	July 15, 2002	Manufacture Display products	CNY 3,020
LG Display Shanghai Co., Ltd.	Shanghai, China	100%	December 31	January 16, 2003	Sell Display products	CNY 4
LG Display Poland Sp. z o.o.	Wroclaw, Poland	100%	December 31	September 6, 2005	Manufacture Display products	PLN 511
LG Display Guangzhou Co., Ltd.	Guangzhou, China	100%	December 31	June 30, 2006	Manufacture Display products	CNY 1,655
LG Display Shenzhen Co., Ltd.	Shenzhen, China	100%	December 31	August 28, 2007	Sell Display products	CNY 4
LG Display Singapore Pte. Ltd.	Singapore	100%	December 31	January 12, 2009	Sell Display products	USD 1.1
L&T Display Technology (Fujian) Limited	Fujian, China	51%	December 31	January 5, 2010	Manufacture and sell LCD module and LCD monitor sets	CNY 116
LG Display Yantai Co., Ltd.	Yantai, China	100%	December 31	April 19, 2010	Manufacture Display products	CNY 1,008
Nanumnuri Co., Ltd.	Gumi, South Korea	100%	December 31	March 21, 2012	Janitorial services	KRW 800
LG Display (China) Co., Ltd.	Guangzhou, China	70%	December 31	December 10, 2012	Manufacture and sell Display products	CNY 8,232
Unified Innovative Technology, LLC	Wilmington, U.S.A.	100%	December 31	March 12, 2014	Manage intellectual property	USD 9
LG Display Guangzhou Trading Co., Ltd.	Guangzhou, China	100%	December 31	April 28, 2015	Sell Display products	CNY 1.2

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

1. Reporting Entity, Continued

(b) Consolidated Subsidiaries as of December 31, 2018, Continued

(In millions)

<u>Subsidiaries</u>	Location	Percentage of ownership	Fiscal year end	Date of incorporation	Business	Capital stocks
Global OLED Technology, LLC	Herndon, U.S.A.	100%	December 31	December 18, 2009	Manage OLED intellectual property	USD 138
LG Display Vietnam Haiphong Co., Ltd.(*1)	Haiphong Vietnam	100%	December 31	May 5, 2016	Manufacture Display products	USD 300
Suzhou Lehui Display Co., Ltd.	Suzhou, China	100%	December 31	July 1, 2016	Manufacture and sell LCD module and LCD monitor sets	CNY 637
LG DISPLAY FUND I LLC(*2)	Wilmington, U.S.A.	100%	December 31	May 1, 2018	Invest in venture business and obtain technologies	USD 2
LG Display High-Tech (China) Co., Ltd.(*3)	Guangzhou, China	69%	December 31	July 11, 2018	Manufacture Display products	CNY 6,517
Money Market Trust(*4)	Seoul, South Korea	100%	December 31	_	Money market trust	KRW 24,501

^(*1) For the year ended December 31, 2018, the Controlling Company contributed \(\psi 212,600\) million in cash for the capital increase of LG Display Vietnam Haiphong Co., Ltd. ("LGDVN").

₩349,977 million, ₩603,493 million and ₩90,281 million, respectively, are attributable to the Controlling Company over the distributed dividends from consolidated subsidiaries for the years ended December 31, 2016, 2017 and 2018.

^(*2) For the year ended December 31, 2018, the Controlling Company established LG DISPLAY FUND I LLC in Wilmington, U.S.A. to invest in venture business and the Controlling Company has a 100% equity interest of this subsidiary.

^(*3) For the year ended December 31, 2018, the Controlling Company established LG Display High-Tech (China) Co., Ltd. in Guangzhou China to manufacture Display products and the Group has a 69% equity interest of this subsidiary.

^(*4) For the year ended December 31, 2018, the Controlling Company acquired and disposed interests in Money Market Trust ("MMT") and the MMT amount as of December 31, 2018 is \(\frac{\pma}{2}\)4,501 million.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

2. <u>Basis of Presenting Financial Statements</u>

(a) Statement of Compliance

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs") as issued by the International Accounting Standards Board.

The consolidated financial statements were authorized for issuance by the Board of Directors on January 29, 2019.

(b) Basis of Measurement

The consolidated financial statements have been prepared on the historical cost basis except for the following material items in the consolidated statements of financial position:

- derivative financial instruments at fair value, financial assets at fair value through profit or loss ("FVTPL") and financial asset at fair value through other comprehensive income ("FVOCI"), and
- net defined benefit liabilities are recognized as the present value of defined benefit obligations less the fair value of plan assets

(c) Functional and Presentation Currency

The consolidated financial statements are presented in Korean won, which is the Controlling Company's functional currency.

(d) Use of Estimates and Judgments

The preparation of the consolidated financial statements in conformity with IFRSs requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is included in the following notes:

• Financial instruments (note 3(f))

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next 12 months is included in the following notes:

- Recognition and measurement of provisions (note 3(1) and 13)
- Measurement of defined benefit obligations (note 12)
- Deferred tax assets (note 24)

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies

The significant accounting policies followed by the Group in the preparation of its consolidated financial statements are as follows:

(a) Changes in Accounting Policies

The Group has initially adopted IFRS 9, Financial Instruments, IFRS 15, Revenue from Contracts with Customers, and IFRIC 22, Foreign Currency Transactions and Advance Consideration, from January 1, 2018.

The Group has consistently applied the accounting policies to the consolidated financial statements for 2018 and 2017 except for the new amendments effective for annual period beginning January 1, 2018 as mentioned below.

(i) IFRS 9, Financial Instruments

IFRS 9 set out requirements for recognizing and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standards replaces IAS 39, *Financial Instruments: Recognition and Measurement*. The Group has initially adopted IFRS 9, *Financial Instruments*, from January 1, 2018, and the Group has used an exemption not to restate the consolidated financial statements for prior years with respects to transition requirements.

The followings describe the nature and impact on the significant changes in accounting policies from the adoption of IFRS 9. There is no impact on the opening balance of retained earnings at January 1, 2018 resulting from the initial adoption of IFRS 9.

Classification and measurement of financial assets and financial liabilities

IFRS 9 contains three principal classification categories for financial assets measured at: amortized cost, FVOCI and FVTPL. The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. IFRS 9 eliminates the previous IAS 39 categories of held to maturity, loans and receivables and available for sale.

IFRS 9 largely retains the existing requirements in IAS 39 for the classification and measurement of financial liabilities.

The adoption IFRS 9 has not had a significant effect on the Group's accounting policies related to financial liabilities and derivative financial instruments. The following table below explains the original measurement categories under IAS 39 and the changes in measurement categories under IFRS 9 for each class of the Group's financial assets as at January 1, 2018.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(a) Changes in Accounting Policies, Continued

(In millions of won)	Classification under IAS 39	Classification under IFRS 9	Carrying amount under IAS 39	Carrying amount under IFRS 9	Difference
Financial assets					
Cash and cash equivalents	Loans and receivables	Amortized cost	₩ 2,602,560	2,602,560	_
Deposits	Loans and receivables	Amortized cost	758,089	758,089	_
Trade receivables	Loans and receivables	Amortized cost	4,325,120	4,325,120	_
Other receivables	Loans and receivables	Amortized cost	173,565	173,565	_
Debt instrument	Available-for-sale	FVOCI-debt instrument	162	162	_
Equity instrument	Available-for-sale	Mandatorily at FVTPL	4,980	4,980	_
Convertible bonds	Designated as at FVTPL	Mandatorily at FVTPL	1,552	1,552	_
Derivatives	Designated as at FVTPL	Mandatorily at FVTPL	842	842	_
Others	Loans and receivables	Amortized cost	79,552	79,552	
Total financial assets			W 7,946,422	7,946,422	

As of January 1, 2018, there was no financial liabilities measured at FVTPL.

Impairment of financial assets

IFRS 9 replaces the 'incurred loss' model in IAS 39 with an 'expected credit loss' (ECL) model. The new impairment model applies to financial assets measured at amortized cost, contract assets and debt investments at FVOCI, but not to investments in equity instruments. Under IFRS 9, credit losses are recognized earlier than under IAS 39.

As a result of applying the new impairment model under IFRS 9, as of January 1, 2018, there is no additional allowance for impairments recognized as compared with the impairment model under IAS 39.

Hedge Accounting

When initially applying IFRS 9, the Group has elected as its accounting policy to continue to apply hedge accounting requirements under IAS 39 and as a result, there is no impact of applying IFRS 9 on the consolidated financial statements as at January 1, 2018.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(a) Changes in Accounting Policies, Continued

(ii) IFRS 15, Revenue from Contracts with Customers

IFRS 15, Revenue from contracts with customers, establishes a comprehensive framework for determining whether, how much and when revenue is recognized. IFRS 15 replaces existing revenue recognition guidance, including IAS 18, Revenue, IAS 11, Construction Contracts, SIC-31, Revenue: Barter Transactions Involving Advertising Services, IFRIC 13, Customer Loyalty Programmes, IFRIC 15, Agreements for the Construction of Real Estate and IFRIC 18, Transfers of Assets from Customers.

The Group has initially adopted IFRS 15, *Revenue from contracts with customers*, from January 1, 2018. The Group has adopted IFRS 15 using the cumulative effect method with the effect of initially applying this standard recognized at the date of initial application, January 1, 2018. As a result of this change, the refund liability and a new asset for the right to recover returned goods increased by \(\frac{\text{W}}{9}\),789 million, respectively, as of January 1, 2018. There is no impact on the opening balance of retained earnings at January 1, 2018. (Note 5(d), 13)

The effect of the application of IFRS 15 on the Group's consolidated statement of financial position as of December 31, 2018 is as follows. There is no significant impact on the consolidated statement of comprehensive income and the cash flows for the year ended December 31, 2018.

Amounts without

(In millions of won)

Categories	As reported	Adjustments	adoption of IFRS 15
Current Assets			
Other current assets	₩ 546,048	(7,489)	538,559
Current Liabilities			
Provisions	₩ 98,254	(7,489)	90,765

(iii) IFRIC 22, Foreign Currency Transactions and Advance Consideration

According to the new interpretation, IFRIC 22, Foreign Currency Transactions and Advance Consideration, the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration. If there are multiple payments or receipts in advance, the entity shall determine a date of the transaction for each payment or receipt of advance consideration. There is no significant impact on the consolidated financial statements of the Group.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(b) Consolidation

(i) Business combinations

The Group accounts for business combinations using the acquisition method when control is transferred to the Group. The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred, except if related to the issue of debt or equity securities in accordance with IAS 32 and IFRS 9. The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss.

(ii) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed, or has right to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

(iii) Non-controlling interests

Non-controlling interests ("NCI") are measured at their proportionate share of the acquiree's identifiable net assets at the acquisition date.

Changes in the Group's interest in subsidiaries that do not result in a loss of control are accounted for as equity transactions.

(iv) Loss of control

If the Controlling Company loses control of subsidiaries, the Controlling Company derecognizes the assets and liabilities of the former subsidiaries from the consolidated statement of financial position and recognizes the gain or loss associated with the loss of control attributable to the former controlling interest. Meanwhile, the Controlling Company recognizes any investment retained in the former subsidiaries at its fair value when control is lost.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(b) Consolidation, Continued

(v) Associates and joint ventures (equity method investees)

Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Investments in associates and joint ventures are initially recognized at cost and subsequently accounted for using the equity method of accounting. The carrying amount of investments in associates and joint ventures is increased or decreased to recognize the Group's share of the profits or losses and changes in the Group's proportionate interest of the investee after the date of acquisition. Distributions received from an investee reduce the carrying amount of the investment.

If an associate or joint ventures uses accounting policies different from those of the Controlling Company for like transactions and events in similar circumstances, appropriate adjustments are made to the consolidated financial statements. As of and during the periods presented in the consolidated financial statements, no adjustments were made in applying the equity method.

When the Group's share of losses exceeds its interest in an equity accounted investee, the carrying amount of that interest, including any long-term investments, is reduced to nil, and the recognition of further losses is discontinued except to the extent that the Group has an obligation or has made payments on behalf of the investee.

(vi) Transactions eliminated on consolidation

Intra-group balances and transactions, including income and expenses and any unrealized income and expenses and balance of trade accounts and notes receivable and payable arising from intra-group transactions, are eliminated. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(c) Foreign Currency Transaction and Translation

Transactions in foreign currencies are translated to the respective functional currencies of the Group at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency at the exchange rate on the reporting date. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was originally determined. Foreign currency differences arising on retranslation are recognized in profit or loss, except for differences arising on an investment in equity securities designated as at FVOCI and a financial asset and liability designated as a cash flow hedge, which are recognized in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the original transaction. Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition are recognized in profit or loss in the period in which they arise. Foreign currency differences arising from assets and liabilities in relation to the investing and financing activities including borrowings, bonds and cash and cash equivalents are recognized in finance income (costs) in the consolidated statement of comprehensive income and foreign currency differences arising from assets and liabilities in relation to activities other than investing and financing activities are recognized in other non-operating income (expense) in the consolidated statement of comprehensive income. Relevant foreign currency differences are presented in gross amounts in the consolidated statement of comprehensive income.

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial position and financial performance of the foreign operation are translated into the presentation currency using the following methods. The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, including goodwill and fair value adjustments arising on acquisition, are translated to the Group's functional currency at exchange rates at the reporting date. The income and expenses of foreign operations are translated to the Group's functional currency at exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income. However, if the operation is a non-wholly-owned subsidiary, then the relevant proportionate share of the translation difference is allocated to the non-controlling interests. When a foreign operation is disposed of in its entirety or partially such that control, significant influence or joint control is lost, the cumulative amount in the translation reserve related to that foreign operation is reclassified to profit or loss as part of the gain or loss on disposal. If the Group disposes part of its interest in a subsidiary but retains control, then the relevant proportion of the cumulative amount is reattributed to NCI. When the Group disposes of only part of an associate or joint venture while retaining significant influence or joint control, the relevant proportion of the cumulative amount is reclassified to profit or loss.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation is treated as assets and liabilities of the foreign operation. Thus, they are expressed in the functional currency of the foreign operation and translated at the at each reporting date's exchange rate.

(d) Cash and Cash Equivalents

Cash and cash equivalents include all cash balances and short-term highly liquid investments with an original maturity of three months or less that are readily convertible into known amounts of cash.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(e) Inventories

Inventories are measured at the lower of cost and net realizable value. The cost of inventories is based on the weighted-average method, and includes expenditures incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated selling expenses. In the case of manufactured inventories and work-in-process, cost includes an appropriate share of production overheads based on the actual capacity of production facilities. However, the normal capacity is used for the allocation of fixed production overheads if the actual level of production is lower than the normal capacity.

(f) Financial Instruments

(i) Non-derivative financial assets

Recognition and initial measurement

Trade receivables and debt securities issued are initially recognized when they are originated. All other financial assets or liabilities are recognized in statement of financial position when, and only when, the Group becomes a party to the contractual provisions of the instrument.

A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at FVTPL, transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

Classification and subsequent measurement

i) Financial assets: Policy applicable from January 1, 2018

On initial recognition, a financial asset is classified as measured at: amortized cost; FVOCI – debt investment; FVOCI – equity investments; or FVTPL. Financial assets are not reclassified subsequent to their initial recognition unless the Group changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated at FVTPL:

- it is held within a business model whose objective is to hold assets to collect contractual cash flows; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A debt investment is measured at FVOCI if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(f) Financial Instruments, Continued

On initial recognition of an equity investments that is not held for trading, the Group may irrevocably elect to present subsequent changes in the investment's fair value in OCI. This election is made on an investment-by-investment basis.

All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. This includes all derivative financial assets. At initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

ii) Financial assets: business model: Policy applicable from January 1, 2018

The Group makes an assessment of the objective of the business model in which a financial asset is held at a portfolio level because this best reflects the way the business is managed and information is provided to management. The information considered includes:

- the stated policies and objectives for the portfolio and the operation of those policies in practice. These include whether management's strategy focuses on earning contractual interest income, maintaining a particular interest rate profile, matching the duration of the financial assets to the duration of any related liabilities or expected cash outflows or realizing cash flows through the sale of the assets;
- how the performance of the portfolio is evaluated and reported to the Group's management;
- the risks that affect the performance of the business model (and the financial assets held within that business model) and how those risks are managed;
- how managers of the business are compensated e.g. whether compensation is based on the fair value of the assets managed or the contractual cash flows collected; and
- the frequency, volume and timing of sales of financial assets in prior periods, the reasons for such sales and expectations about future sales activity.

Transfers of financial asset to third parties in transaction that do not qualify for derecognition are not considered sale for this purpose.

A financial assets that are held for trading or are managed and whose performance is evaluated on a fair value basis are measured at FVTPL.

iii) Financial assets: Assessment whether contractual cash flows are solely payments of principal and interest: Policy applicable from January 1, 2018

For the purpose of this assessment, "principal" is defined as the fair value of the financial asset on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and cost (e.g. liquidity risk and administrative costs), as well as profit margin.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

Summary of Significant Accounting Policies, Continued 3.

(f) Financial Instruments, Continued

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers.

- contingent events that would change the amount or timing of cash flows:
- terms that may adjust the contractual coupon rate, including variable-rate features;
- prepayment and extension features; and
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features)

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest or the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

iv) Financial assets: Subsequent measurement and gains and losses: Policy applicable from January 1, 2018

Financial assets at FVTPL	These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss.
Financial assets at amortized cost	These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.
Debt investments at FVOCI	These assets are subsequently measured at fair value. Interest income calculated using the effective interest method, foreign exchange gains and losses and impairment are recognized in profit or loss. Other net gains and losses are recognized in OCI. On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(f) Financial Instruments, Continued

v) Financial assets: Policy applicable before January 1, 2018

The Group has classified financial assets into one of the following categories

- loans and receivables
- available-for-sale
- at FVTPL

vi) Financial assets: subsequent measurement, gains and losses: Policy applicable before January 1, 2018

Financial assets at FVTPL Measured at fair value and changes therein, including any interest or dividend income, were

recognized in profit or loss.

Loans and receivables Measured at amortized cost using the effective interest method.

Available-for-sale financial

assets

Measured at fair value and changes therein, other than impairment losses, interest income and foreign currency differences on debt instruments, were recognized in OCI and accumulated in the fair value reserves. When these assets were derecognized, the gain or

loss accumulated in equity was classified to profit or loss.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(f) Financial Instruments, Continued

Derecognition

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, it transfers the rights to receive the contractual cash flows of the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred, or it transfers or does not retain substantially all the risks and rewards of ownership of a transferred asset, and does not retain control of the transferred asset.

If the Group has retained substantially all the risks and rewards of ownership of the transferred asset, the Group continue to recognize the transferred asset.

Offset

Financial assets and liabilities are offset and the net amount presented in the consolidated statement of financial position when, and only when, the Group has a legal right to offset the amounts and intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(f) Financial Instruments, Continued

(ii) Non-derivative financial liabilities

The Group classifies financial liabilities into two categories, financial liabilities at FVTPL and other financial liabilities, in accordance with the substance of the contractual arrangement and the definitions of financial liabilities, and recognizes them in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Financial liabilities at FVTPL include financial liabilities held for trading or designated as such upon initial recognition at FVTPL. After initial recognition, financial liabilities at FVTPL are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, transaction costs that are directly attributable to the issuance of financial liabilities are recognized in profit or loss as incurred.

Non-derivative financial liabilities other than financial liabilities classified as FVTPL are classified as other financial liabilities and measured initially at fair value minus transaction costs that are directly attributable to the issuance of financial liabilities. Subsequent to initial recognition, these financial liabilities are measured at amortized cost using the effective interest method. As of December 31, 2018, non-derivative financial liabilities comprise borrowings, bonds and others.

The Group derecognizes a financial liability when its contractual obligations are discharged, cancelled or expired.

(iii) Share capital

The Group only issued common stocks and they are classified as equity. Incremental costs directly attributable to the issuance of common stocks are recognized as a deduction from equity, net of tax effects. Capital contributed in excess of par value upon issuance of common stocks is classified as share premium within equity.

(iv) Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

Hedge accounting

If necessary, the Group designates derivatives as hedging items to hedge the risk of changes in the fair value of assets, liabilities or firm commitments (a fair value hedge) and foreign currency risk of highly probable forecasted transactions or firm commitments (a cash flow hedge).

On initial designation of the hedge, the Group's management formally designates and documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship, both at the inception of the hedge relationship as well as on an ongoing basis.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. <u>Summary of Significant Accounting Policies, Continued</u>

(f) Financial Instruments, Continued

i) Fair value hedges

Change in the fair value of a derivative hedging instrument designated as a fair value hedge and the hedged item is recognized in profit or loss, respectively. The gain or loss from remeasuring the hedging instrument at fair value and the gain or loss on the hedged item attributable to the hedged risk are recognized in profit or loss in the same line item of the statement of comprehensive income. The Group discontinues fair value hedge accounting if it does not designate the derivative hedging instrument and the hedged item as the hedge relationship between them anymore or if the hedging instrument expires or is sold, terminated or exercised, or if the hedge no longer meets the criteria for hedge accounting. Any adjustment arising from gain or loss on the hedged item attributable to the hedged risk is amortized to profit or loss from the date the hedge accounting is discontinued.

ii) Cash flow hedges

When a derivative designated as a cash flow hedging instrument meets the criteria of cash flow hedge accounting, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income and the ineffective portion of changes in the fair value of the derivative is recognized in profit or loss. The Group discontinues cash flow hedge accounting if it does not designate the derivative hedging instrument and the hedged item as the hedge relationship between them anymore or if the hedging instruments expires or is sold, terminated or exercised, or if the hedge no longer meets the criteria for hedge accounting. The cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income is reclassified to profit or loss in the periods during which the forecasted transaction occurs. If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss.

Embedded derivative

Embedded derivatives are separated from the host contract and accounted for separately if the host contract is not a financial asset and certain criteria are met.

Other derivative financial instruments

Derivative financial instruments are measured at fair value and changes of them not designated as a hedging instrument or not effective for hedging are recognized in profit or loss.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(g) Property, Plant and Equipment

(i) Recognition and measurement

Items of property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses. Cost includes an expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labor, any costs directly attributable to bringing the assets to a working condition for their intended use, the costs of dismantling and removing the items and restoring the site on which they are located and borrowing costs on qualifying assets.

The gain or loss arising from the derecognition of an item of property, plant and equipment is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item and recognized in other non-operating income or other non-operating expenses.

(ii) Subsequent costs

Subsequent expenditure on an item of property, plant and equipment is recognized as part of its cost only if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The costs of the day-to-day servicing of property, plant and equipment are recognized in profit or loss as incurred.

(iii) Depreciation

Depreciation is recognized in profit or loss on a straight-line basis, reflecting the pattern in which the asset's future economic benefits are expected to be consumed by the Group. The residual value of property, plant and equipment is zero. Land is not depreciated.

Estimated useful lives of the assets are as follows:

	Useful lives (years)
Buildings and structures	20, 40
Machinery	4, 5
Furniture and fixtures	4
Equipment, tools and vehicles	2, 4, 12

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate and any changes are accounted for as changes in accounting estimates.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(g) Property, Plant and Equipment, Continued

During the year ended December 31, 2018, the Group changed estimated useful lives of the mask and mold which had previously been classified as inventories. Based on the review of the accumulated historical usage information that became available, it is expected that the mask and mold will be used for the period exceeding one year. Accordingly, the Group changed useful lives of Mask and Mold to two years accounted for the change in accounting estimate and reclassified the mask and mold to property, plant and equipment from inventories. As a result of such change, the Group reclassified inventories amounting to \times 111,456 million at the beginning of January 1, 2018 to property, plant, and equipment. The impact on the depreciation expense of the property, plant and equipment at the beginning of January 1, 2018 and newly acquired property, plant and equipment during the year ended December 31, 2018 are as follows:

(In millions of won)

Description	2018	2019	2020
Increase (decrease) in depreciation expense	$\overline{W(110,373)}$	58,364	52,009

(h) Borrowing Costs

The Group capitalizes borrowing costs, which includes interests and exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs, directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. A qualifying asset is an asset that necessarily takes a substantial period of time to get ready for its intended use or sale. To the extent that the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization as the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings. The Group immediately recognizes other borrowing costs as an expense.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(i) Government Grants

In case there is reasonable assurance that the Group will comply with the conditions attached to a government grant, the government grant is recognized as follows:

(i) Grants related to the purchase or construction of assets

A government grant related to the purchase or construction of assets is deducted in calculating the carrying amount of the asset. The grant is recognized in profit or loss over the life of a depreciable asset as a reduced depreciation expense and cash related to grant received is presented in investing activities in the statement of cash flows.

(ii) Grants for compensating the Group's expenses incurred

A government grant that compensates the Group for expenses incurred is recognized in profit or loss as a deduction from relevant expenses on a systematic basis in the periods in which the expenses are recognized.

(iii) Other government grants

A government grant that becomes receivable for the purpose of giving immediate financial support to the Group with no compensation for expenses or losses already incurred or no future related costs is recognized as income of the period in which it becomes receivable.

(j) <u>Intangible Assets</u>

Intangible assets are initially measured at cost. Subsequently, intangible assets are measured at cost less accumulated amortization and accumulated impairment losses.

(i) Goodwill

Goodwill arising from business combinations is recognized as the excess of the acquisition cost of investments in subsidiaries, associates and joint ventures over the Group's share of the net fair value of the identifiable assets acquired and liabilities assumed. Any deficit is a bargain purchase that is recognized in profit or loss. Goodwill is measured at cost less accumulated impairment losses.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(j) <u>Intangible Assets, Continued</u>

(ii) Research and development

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognized in profit or loss as incurred.

Development activities involve a plan or design of the production of new or substantially improved products and processes. Development expenditure is capitalized only if the Group can demonstrate all of the following:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale,
- its intention to complete the intangible asset and use or sell it,
- its ability to use or sell the intangible asset,
- how the intangible asset will generate probable future economic benefits. Among other things, the Group can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset,
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset, and
- its ability to measure reliably the expenditure attributable to the intangible asset during its development.

The expenditure capitalized includes the cost of materials, direct labor, overhead costs that are directly attributable to preparing the asset for its intended use, and borrowing costs on qualifying assets.

(iii) Other intangible assets

Other intangible assets include intellectual property rights, software, customer relationships, technology, memberships and others.

(iv) Subsequent costs

Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific intangible asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognized in profit or loss as incurred.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(j) <u>Intangible Assets, Continued</u>

(v) Amortization

Amortization is calculated on a straight-line basis over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use. The residual value of intangible assets is zero. However, as there are no foreseeable limits to the periods over which condominium and golf club memberships are expected to be available for use, these intangible assets are regarded as having indefinite useful lives and not amortized.

	Estimated useful lives (years)
Intellectual property rights	5, 10
Rights to use electricity, water and gas supply	
facilities	10
Software	4
Customer relationships	7, 10
Technology	10
Development costs	(*)
Condominium and golf club memberships	Not amortized

(*) Capitalized development costs are amortized over the useful life considering the life cycle of the developed products. Amortization of capitalized development costs is recognized in research and development expenses in the consolidated statement of comprehensive income.

Amortization periods and the amortization methods for intangible assets with finite useful lives are reviewed at each financial year-end. The useful lives of intangible assets that are not being amortized are reviewed each period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. If appropriate, the changes are accounted for as changes in accounting estimates.

(k) Impairment

(i) Financial assets

Financial instruments and contract assets: Policy applicable from January 1, 2018

The Group recognizes loss allowance for financial assets measured at amortized cost and debt investments at FVOCI at the 'expected credit loss' (ECL).

The Group recognizes a loss allowance for the life-time expected credit losses except for following, which are measured at 12-month ECLs:

- debt securities that are determined to have low credit risk at the reporting date; and
- other debt securities and bank securities for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both qualitative and quantitative information and analysis, based on the Group's historical experience and informed credit assessment including forward-looking information.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. <u>Summary of Significant Accounting Policies, Continued</u>

(k) Impairment, Continued

Lifetime ECLs are the ECLs that result from all possible default events over the expected life of a financial instrument.

12-month ECLs are the portion of the ECLs that result from default events that are possible within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

Estimation of expected credit losses: Policy applicable from January 1, 2018

Expected credit losses are a probability-weighted estimate of credit losses (i.e. the present value of all cash shortfalls) over the expected life of the financial instrument. Credit losses are measured using the present value of a cash shortfall (the difference between the contractual cash flows and the expected contractual cash flows). The expected credit losses are discounted using effective interest rate of the financial assets.

Credit-impaired financial assets: Policy applicable from January 1, 2018

At each reporting period-end, the Group assesses whether financial assets carried at amortized cost and debt securities at FVOCI are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Evidence that a financial asset is credit-impaired includes the following observable data:

- significant financial difficulty of the issuer or the borrower;
- the restructuring of a loan or advance by the Group on terms that the Group would not consider otherwise;
- it is probable that the borrower will enter bankruptcy or other financial reorganization; or
- the disappearance of an active market for a security because of financial difficulties;

Presentation of loss allowance for ECL in the statement of financial position: Policy applicable from January 1, 2018

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets. For debt securities at FVOCI, the loss allowance is charged to profit or loss and is recognized in OCI.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(k) <u>Impairment, Continued</u>

Write-off: Policy applicable from January 1, 2018

The gross carrying amount of a financial asset is written off when the Group has no reasonable expectations for recovering a financial asset in its entirety or a portion thereof. The Group assess whether there are reasonable expectations of recovering the contractual cash flows from customers and individually assess the timing and amount of write-off. The Group expects no significant recovery from the amount written-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group's procedures for recovery of amounts due.

Non-derivative financial assets: Policy applicable before January 1, 2018

Financial assets not classified as at FVTPL were assessed at each reporting date to determine whether there was objective evidence of impairment.

Objective evidence that financial assets were impaired included:

- default or delinquency by a debtor;
- restructuring of an amount due to the Group on terms that the Group would not consider otherwise
- indications that a debtor or issuer would enter bankruptcy
- adverse changes in the payment status of borrowers or issuers;
- the disappearance of an active market for a security because of financial difficulties
- observable data indicating that there was measurable decrease in the expected cash flows from a group of financial assets.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(k) Impairment, Continued

For an investment in an equity instrument, objective evidence of impairment include a significant or prolonged decline in its fair value below its cost.

The Group considered evidence of impairment for these assets at both collective level and individual asset. All individual significant assets were individually assessed for impairment. Those found not to be impaired were then collectively assessed for any impairment that had been incurred but not yet individually identified. Assets that were not individually significant were collectively assessed for impairment. Collective assessment was carried out by grouping together assets with similar risk characteristics.

Financial assets at amortized cost

In assessing collective impairment, the Group used historical information on the timing of recoveries and the amount of loss incurred and made an adjustment if current economic and credit conditions were such that the actual losses were likely to be greater or lesser than suggested by historical trends.

An impairment loss was calculated as the difference between an asset's carrying amount and the present value of the estimated future cash flows discounted at the asset's original effective interest rate. Losses were recognized in profit or loss and reflected in an allowance account.

For financial assets such as equity instruments which the carrying amount would be the cost, the impairment loss is the difference between the carrying value and the present value of estimated future cash receipts of a similar financial instruments discounted at current market rate. The impairment loss is recognized as profit and losses and would be not reversed as profit and losses.

For the financial assets classified as available-for-sale which its decrease in the fair value has been recognized as other comprehensive income, the loss which has been recognized as other comprehensive income would be reclassified from other comprehensive income to profit and losses less the amount already recognized as profit and losses.

Available-for-sale financial assets

If the fair value of an impaired available-for-sale debt security subsequently increased and the increase was related objectively to an event occurring after the impairment loss was recognized, then the impairment loss was reversed through profit or loss. Impairment losses recognized in profit or loss for an investment in an equity instrument classified as available-for-sale were not reversed through profit or loss.

(ii) Non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from employee benefits, inventories and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. For goodwill, and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, the recoverable amount is estimated each year at the same time.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(k) Impairment, Continued

For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the "cash-generating unit", or "CGU"). The recoverable amount of an asset or cash-generating unit is determined as the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Fair value less costs to sell is based on the best information available to reflect the amount that the Group could obtain from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal.

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in profit or loss. Goodwill acquired in a business combination is allocated to CGUs that are expected to benefit from the synergies of the combination. Impairment losses recognized in respect of a CGU are allocated first to reduce the carrying amount of any goodwill allocated to the unit, and then to reduce the carrying amounts of the other assets in the unit on a pro rata basis.

In respect of other assets, impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized. An impairment loss in respect of goodwill is not reversed.

(1) Provisions

A provision is recognized if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation.

The risks and uncertainties that inevitably surround events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows. The unwinding of the discount is recognized as finance cost.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(1) Provisions, Continued

The Group recognizes a liability for warranty obligations based on the estimated costs expected to be incurred under its basic limited warranty. This warranty covers defective products and is normally applicable for eighteen months from the date of purchase. These liabilities are accrued when product revenues are recognized. Factors that affect the Group's warranty liability include historical and anticipated rates of warranty claims on those repairs and cost per claim to satisfy the Group's warranty obligation. Warranty costs primarily include raw materials and labor costs. As these factors are impacted by actual experience and future expectations, management periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary. Accrued warranty obligations are included in the current and non-current provisions.

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, and penalties and other sources, are recorded when it is probable that a liability has been incurred and the amount of the assessment and/or remediation can be reasonably estimated.

(m) Non-current Assets Held for Sale

Non-current assets, or disposal groups comprising assets and liabilities, are classified as held-for-sale if it is highly probable that they will be recovered primarily from sale rather than through continuing use. In order to be classified as held for sale, the asset (or disposal group) is available for immediate sale in its present condition and its sale is highly probable. The assets (or disposal groups) that are classified as non-current assets held for sale are measured at the lower of their carrying amount and fair value less costs to sell on initial classification. The Group recognizes an impairment loss for any subsequent decrease in fair value of the asset (or disposal group) for which an impairment loss was recognized on initial classification as held-for-sale and a gain for any subsequent increase in fair value in profit or losses, up to the cumulative impairment loss previously recognized.

The Group does not depreciate a non-current asset while it is classified as held for sale or while it is part of a disposal group classified as held for sale.

(n) Employee Benefits

(i) Short-term employee benefits

Short-term employee benefits that are due to be settled within twelve months after the end of the period in which the employees render the related service are recognized in profit or loss on an undiscounted basis. The expected cost of profit-sharing and bonus plans and others are recognized when the Group has a present legal or constructive obligation to make payments as a result of past events and a reliable estimate of the obligation can be made.

(ii) Other long-term employee benefits

The Group's net obligation in respect of long-term employee benefits other than pension plans is the amount of future benefit that employees have earned in return for their service in the current and prior periods.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(n) Employee Benefits, Continued

(iii) Defined contribution plan

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension plans are recognized as an employee benefit expense in profit or loss in the periods during which services are rendered by employees.

(iv) Defined benefit plan

A defined benefit plan is a post-employment benefit plan other than defined contribution plans. The Group's net obligation in respect of its defined benefit plan is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted.

The calculation is performed annually by an independent actuary using the projected unit credit method. The discount rate is the yield at the reporting date on high quality corporate bonds that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The Group recognizes all actuarial gains and losses arising from defined benefit plans in retained earnings immediately.

The Group determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then-net defined benefit liability (asset), taking into account any changes in the net defined benefit liability (asset) during the period as a result of contributions and benefit payments. Consequently, the net interest on the net defined benefit liability (asset) now comprises: interest cost on the defined benefit obligation, interest income on plan assets, and interest on the effect on the asset ceiling.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

(v) Termination benefits

The Group recognizes expense for termination benefits at the earlier of the date when the entity can no longer withdraw the offer of those benefits and when the entity recognizes costs for a restructuring that is within the scope of IAS 37 and involves the payment of termination benefits. If the termination benefits are not expected to be settled wholly before twelve months after the end of the annual reporting period, the Group measures the termination benefit with present value of future cash payments.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(o) Revenue from contracts with customers

Revenue from the sale of goods in the course of ordinary activities is measured at the fair value of the consideration received or receivable, net of estimated returns, earned trade discounts, volume rebates and other cash incentives paid to customers. The Group has initially applied IFRS 15 from January 1, 2018 and recognized revenue according to the 5 stage revenue recognition model (①Identifying the contract \rightarrow ② Identifying performance obligation \rightarrow ③ Determining transaction price \rightarrow ④ Allocating the transaction price to performance obligation \rightarrow ⑤ Recognition of revenue at performance of obligation). The Group generates revenue primarily from sales of display panels to customer. Product revenue is recognized when the customer obtains control over the products, which typically occurs upon shipment or delivery depending on the terms of the contracts with the customers.

The Group includes return option in the sales contract of display panels to its customers thus the consideration received from the customer is subject to change. The Group has recognized the expected return amount of gross revenue as warranty provision until previous financial year. After applying the IFRS 15 "Revenue from contracts with customers", the Group estimates an amount of variable consideration by using the expected value method which the Group expects to better predict the amount of consideration. The Group includes in the transaction price some or all of an amount of variable consideration estimated only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. The Group recognizes a refund liability and an asset for its right to recover products from customers if the Group receives consideration from a customer and expects to refund some or all of that consideration to the customer. Sales taxes collected from customers and remitted to governmental authorities are accounted for on a net basis and therefore are excluded from revenues in the consolidated statements of comprehensive income.

(p) Operating Segments

An operating segment is a component of the Group that: 1) engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with other components of the group, 2) whose operating results are reviewed regularly by the Group's chief operating decision maker ("CODM") in order to allocate resources and assess its performance, and 3) for which discrete financial information is available. Management has determined that the CODM of the Group is the Board of Directors. The CODM does not receive and therefore does not review discrete financial information for any component of the Group. Consequently, no operating segment information is included in these consolidated financial statements. Entity wide disclosures of geographic and product revenue information are provided in note 17 to these consolidated financial statements.

(q) Finance Income and Finance Costs

Finance income comprises interest income on funds invested (including debt instruments measured at FVOCI), dividend income, gains on the disposal of debt instruments measured at FVOCI, changes in the fair value of financial assets at FVTPL, and gains on hedging instruments that are recognized in profit or loss. Interest income is recognized as it accrues in profit or loss, using the effective interest method. Dividend income is recognized in profit or loss on the date that the Group's right to receive payment is established.

Finance costs comprise interest expense on borrowings, unwinding of the discount on provisions, gain and losses from financial assets measured at FVTPL, impairment losses recognized on financial assets, and losses on hedging instruments that are recognized in profit or loss. Borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset are capitalized as part of the cost of that asset.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(r) Income Tax

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

(i) Current tax

Current tax is the expected tax payable or receivable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the reporting date and any adjustment to tax payable in respect of previous years. The taxable profit is different from the accounting profit for the period since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit (tax loss) of future periods, and non-taxable or non-deductible items from the accounting profit.

(ii) Deferred tax

Deferred tax is recognized, using the liability method, in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. However, deferred tax is not recognized for taxable temporary differences arising on the initial recognition of goodwill.

The Group recognizes a deferred tax liability for all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint ventures, except to the extent that the Group is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future. A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that the differences relating to investments in subsidiaries, associates and joint ventures will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

The Group offsets deferred tax assets and deferred tax liabilities if, and only if the Group has a legally enforceable right to set off current tax assets against current tax liabilities and the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously.

(s) Earnings Per Share

The Controlling Company presents basic and diluted earnings per share ("EPS") data for its common stocks. Basic EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the Controlling Company by the weighted average number of common stocks outstanding during the period. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of common stocks outstanding, adjusted for the effects of all dilutive potential common stocks such as convertible bonds and others.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(t) New Standards and Amendments Not Yet Adopted

The following new standards and amendments to existing standards have been published and are mandatory for the Group for annual periods beginning after January 1, 2018, and the Group has not early adopted them.

(i) IFRS 16, Leases

IFRS 16, *Leases*, issued on January 13, 2016 is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. IFRS 16 replaces existing leases guidance including IAS 17, *Leases*, IFRIC 4, *Determining whether an Arrangement contains a Lease*, SIC-15, *Operating Leases—Incentives* and SIC-27, *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*.

IFRS 16, *Leases* introduces a single, on-balance sheet lease accounting model for lessees. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short-term leases and leases of low value items. Lessor accounting remains similar to the current standard - i.e lessors continue to classify leases as finance or operating leases.

Previously, the Group recognized operating lease expense on a straight-line basis over the term of the lease. The nature of expenses related to those leases will now change because the Group will recognize a depreciation charge for right-of-use assets and interest expense on lease liabilities.

No significant impact is expected for the Group's finance lease.

A lessee may apply the IFRS 16 to its leases either:

- Retrospectively to each prior reporting period presented
- Retrospectively with the cumulative effect of initially applying the Standard recognized at the date of initial application

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

3. Summary of Significant Accounting Policies, Continued

(t) New Standards and Amendments Not Yet Adopted, Continued

A lessee shall apply the election consistently to all of its lease in which it is a lessee. The Group will apply IFRS 16 initially on January 1, 2019, using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognized as an adjustment to the opening balance of retained earnings at January 1, 2019, with no restatement of comparative information.

A lessee may use various practical expedients when applying IRFS 16 retrospectively to leases previously classified as operating leases applying IAS 17. Based on the Group's assessment on the impact of the adoption, the right-of-use assets and lease liabilities increase as of January 1, 2019 and the overall impact on its consolidated financial statements are not significant as it accounts less than 1% of the Group's total assets.

(ii) Other standards

The following amended standards and interpretations are not expected to have a significant impact on the Group's financial statements.

- IFRIC 23, Uncertainty over Tax Treatments
- IFRS 9, Prepayment Features with Negative Compensation (Amendments to IFRS 9)
- IAS 28, Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28)
- IAS 19, Plan Amendment, Curtailment or Settlement (Amendments to IAS 19)
- Amendments to References to Conceptual Framework in IFRS Standards.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

4. Cash and Cash Equivalents and Deposits in Banks

Cash and cash equivalents and deposits in banks as of December 31, 2017 and December 31, 2018 are as follows:

(In millions of won)

	Dece	ember 31, 2017	December 31, 2018
Current assets		_	
Cash and cash equivalents			
Demand deposits	₩	2,602,560	2,365,022
Deposits in banks			
Time deposits	₩	685,238	4,318
Restricted cash(*)		72,840	74,082
	₩	758,078	78,400
Non-current assets			
Deposits in banks			
Restricted cash(*)	₩	11	11
	₩	3,360,649	2,443,433

^(*) Restricted cash includes mutual growth fund to aid LG Group's second and third-tier suppliers, pledge to enforce investment plans according to the receipt of subsidies from Gumi city and Gyeongsangbuk- do and others.

5. Receivables and Other Assets

(a) Trade accounts and notes receivable as of December 31, 2017 and December 31, 2018 are as follows:

(In millions of won)

	December 31, 2017		December 31, 2018	
Trade, net	W	3,275,902	2,305,368	
Due from related parties		1,049,218	523,795	
	W	4,325,120	2,829,163	

(b) Other accounts receivable as of December 31, 2017 and December 31, 2018 are as follows:

(In millions of won)	Decem	nber 31, 2017	December 31, 2018
Current assets			
Non-trade receivable, net	W	150,554	159,238
Accrued income		14,273	10,075
	W	164,827	169,313
Non-current assets			
Long-term non-trade receivable		8,738	11,448
	₩	173,565	180,761

Due from related parties included in other accounts receivable, as of December 31, 2017 and 2018 are \text{\text{\$\psi}}10,821 million and \text{\$\psi}39,092 million, respectively.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

5. Receivables and Other Assets, Continued

(c) The aging of trade accounts and notes receivable, and other accounts receivable as of December 31, 2017 and December 31, 2018 are as follows:

(In millions of won)	December 31, 2017						
	Book va	Impairmen	t loss				
	Trade accounts and notes receivable	Other accounts receivable	Trade accounts and notes receivable	Other accounts receivable			
Not past due	W 4,323,465	173,493	(1,631)	(905)			
Past due 1-15 days	2,652	488	(1)	(3)			
Past due 16-30 days	631	65	_	(1)			
Past due 31-60 days	_	208	_	(2)			
Past due more than 60 days	4	622		(400)			
	W 4,326,752	174,876	(1,632)	(1,311)			

(In millions of won)	December 31, 2018				
	Book va	lue	Impairmen	t loss	
	Trade accounts and notes receivable	Other accounts receivable	Trade accounts and notes receivable	Other accounts receivable	
Not past due	₩ 2,807,598	177,689	(473)	(816)	
Past due 1-15 days	21,558	3,148	(4)	(26)	
Past due 16-30 days	454	441	_	(4)	
Past due 31-60 days	30	96	_	(1)	
Past due more than 60 days		668		(434)	
	₩ 2,829,640	182,042	(477)	(1,281)	

The movement in the allowance for impairment in respect of trade accounts and notes receivable and other accounts receivable for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of won)	Trade accoun	Trade accounts and notes receivable		
	2016	2017	2018	
Balance at the beginning of the year	₩ 1,507	1,488	1,632	
(Reversal of) bad debt expense	(19)	144	(1,155)	
Balance at the end of the year	₩ 1,488	1,632	477	
(In millions of won)	Other a	ccounts receiva	able	
	2016	2017	2018	
Balance at the beginning of the year	₩ 618	1,116	1,311	
(Reversal of) bad debt expense	498	195	(30)	
Balance at the end of the year	₩ 1.116	1.311	1.281	

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

5. Receivables and Other Assets, Continued

(d) Other assets as of December 31, 2017 and December 31, 2018 are as follows:

(In millions of won)	Decem	ber 31, 2017	December 31, 2018
Current assets			
Advance payments	W	7,973	13,259
Prepaid expenses		83,626	89,110
Value added tax refundable		148,351	436,190
Emission rights		1,978	_
Right to recover returned goods(*)			7,489
	₩	241,928	546,048
Non-current assets			
Long-term prepaid expenses	₩	394,759	381,983

^(*) As a result from the initial application of IFRS 15, the Group recognized an asset for right to recover goods returned by the customer.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

6. Other Financial Assets

(a) Other financial assets as of December 31, 2017 are as follows:

(In millions of won)	Decem	ber 31, 2017
Current assets		
Available-for-sale financial assets		
Debt instrument Government bonds	W	6
Deposits		10,480
Short-term loans		16,766
	₩	27,252
Non-current assets		
Financial asset at fair value through profit or loss	₩	1,552
Available-for-sale financial assets Debt instrument		
Government bonds	₩	156
Equity instrument		
Intellectual Discovery, Ltd.	W	729
Kyulux, Inc.		1,968
ARCH Venture Fund Vill, LP.		2,283
	W	4,980
Deposits	W	19,898
Long-term loans		32,408
Derivatives(*)		842
	₩	59,836

^(*) Represents interest rate swap contracts related to borrowings with variable interest rate.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

6. Other Financial Assets, Continued

(b) Other financial assets as of December 31, 2018 are as follows:

(In millions of won)	Decem	ber 31, 2018
Current assets		
Financial asset at fair value through profit or loss		
Derivatives(*)	₩	13,059
Financial asset at fair value through other comprehensive		
income		
Debt instrument		
Government bonds	₩	106
Financial asset carried at amortized cost		
Deposits	W	17,020
Short-term loans		16,116
	W	46,301
Non-current assets		
Financial asset at fair value through profit or loss		
Equity instrument		
Intellectual Discovery, Ltd.	W	4,598
Kyulux, Inc.		2,460
Fineeva Co., Ltd.		286
ARCH Venture Fund Vill, L.P.		6,337
	W	13,681
Convertible bonds	₩	1,327
Financial asset at fair value through other comprehensive		
income		
Debt instrument		
Government bonds	W	55
Financial asset carried at amortized cost		
Deposits	W	74,103
Long-term loans		55,048
	W	144,214

^(*) Represents exchange rate swap contracts related to foreign currency denominated borrowings and bonds.

Other financial assets of related parties as of December 31, 2017 and 2018 are \psi_2,750 million and \psi_2,000 million, respectively.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

7. <u>Inventories</u>

Inventories at the reporting date are as follows:

(In millions of won)	December 31, 2017	December 31, 2018
Finished goods	W 965,643	1,084,297
Work-in-process	748,592	856,388
Raw materials	344,997	554,720
Supplies	290,852	195,798
	W 2,350,084	2,691,203

For the years ended December 31, 2016, 2017 and 2018, the amount of inventories recognized as cost of sales and inventory write-downs included in cost of sales are as follows:

(In millions of won)	2016	2017	2018
Inventories recognized as cost of sales	₩ 22,754,270	22,424,661	21,251,305
Including: inventory write-downs	204,123	206,127	313,180

There were no significant reversals of inventory write-downs recognized during 2016, 2017 and 2018.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

8. <u>Investments in Equity Accounted Investees</u>

(a) Associates at the reporting date are as follows:

(In millions of won)					2	2017	2	2018
Associates	Location	Fiscal year end	Date of incorporation	Business	Percentage of ownership	Carrying amount	Percentage of ownership	Carrying amount
Paju Electric Glass Co., Ltd.	Paju, South Korea	December 31	January 2005	Manufacture electric glass for FPDs	40%	₩ 46,511	40%	₩ 47,823
INVENIA Co., Ltd.	Seongnam, South Korea	December 31	January 2001	Develop and manufacture equipment for FPDs	13	2,887	13	4,166
WooRee E&L Co., Ltd.(*1)	Ansan, South Korea	December 31	June 2008	Manufacture LED back light unit packages	14	7,270	14	4,746
LB Gemini New Growth Fund No. 16(*2)	Seoul, South Korea	December 31	December 2009	Invest in small and middle sized companies and benefit from M&A opportunities	31	5,910	_	_
YAS Co., Ltd.	Paju, South Korea	December 31	April 2002	Develop and manufacture deposition equipment for OLEDs	15	15,888	15	16,308
AVATEC Co., Ltd.	Daegu, South Korea	December 31	August 2000	Process and sell electric glass for FPDs	17	23,732	17	23,441
Arctic Sentinel, Inc.	Los Angeles, U.S.A.	March 31	June 2008	Develop and manufacture tablet for kids	10	_	10	_

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

8. <u>Investments in Equity Accounted Investees, Continued</u>

(In millions of won)

						2017	2	018
Associates	Location	Fiscal year end	Date of incorporation	Business	Percentage of ownership	Carrying amount	Percentage of ownership	Carrying amount
CYNORA GmbH(*3)	Bruchsal, Germany	December 31	March 2003	Develop organic emitting materials for displays and lighting devices	14%	₩ 20,309	14%	₩ 8,668
Material Science Co., Ltd.(*4)	Seoul, South Korea	December 31	January 2014	Develop, manufacture, and sell materials for display	_	_	10	3,346
Nanosys Inc. (*5)	Milpitas, U.S.A.	December 31	July 2001	Develop, manufacture, and sell materials for display	_		4	5,491
						W 122,507		₩ 113,989

Although the Controlling Company's share interests in INVENIA Co., Ltd., WooRee E&L Co., Ltd., YAS Co., Ltd., AVATEC Co., Ltd., Arctic Sentinel, Inc., Cynora GmbH, Material Science Co., Ltd. and Nanosys Inc. are below 20% as of December 31, 2018, the Controlling Company is able to exercise significant influence through its right to appoint a director to the board of directors of each investee. Accordingly, the investments in these investees have been accounted for using the equity method.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

8. <u>Investments in Equity Accounted Investees, Continued</u>

- (*1) The Controlling Company recognized a reversal of impairment loss of \wxtext{\psi}802 million as finance income for the difference between the carrying amount and the recoverable amount of investments in WooRee E&L Co., Ltd.
- (*2) In 2018, the LB Gemini New Growth Fund No.16 ("the Fund") which the Controlling Company was a member of a limited partnership, was approved to be dissolve at the general meeting and completed liquidation. In 2018, the Controlling Company received \(\pi\)1,545 million in cash from the Fund and recognized \(\pi\)385 million for the difference between the amount received and the carrying amount as finance cost.
- (*3) In 2018, the Controlling Company determined investments in CYNORA GmbH irrecoverable and accordingly recognized an impairment loss of \(\frac{\pmathbf{W}}{11,641}\) million as finance cost for the difference between the carrying amount and the recoverable amount of investments in CYNORA GmbH.
- (*4) In March 2018, the Controlling Company invested \$\pmu4,000\$ million and acquired 10,767 shares of common stock with voting rights in Material Science Co., Ltd. In 2018, the Controlling Company assessed that the recoverability of the investment is uncertain. Accordingly, the Controlling Company recognized an impairment loss of \$\pmu671\$ million as finance cost for the difference between the carrying amount and the recoverable amount of investments in Material Science Co., Ltd.
- (*5) In May 2018, the Controlling Company invested \(\frac{\psi}{10}\),732 million and acquired 5,699,954 shares of preferred stock with voting rights in Nanosys Inc. In 2018, the Controlling Company recognized an impairment loss of \(\frac{\ppi}{5}\),085 million as finance cost for the difference between the carrying amount and the recoverable amount of investments in Nanosys Inc.

As of December 31, 2018, the market value for the Controlling Company's investments in INVENIA Co., Ltd., WooRee E&L Co., Ltd., YAS Co., Ltd., and AVATEC Co., Ltd., all of which are listed in KOSDAQ, are \(\frac{\textbf{W}}{8}\),850 million, \(\frac{\textbf{W}}{4}\),746 million, \(\frac{\textbf{W}}{3}\)1,200 million and \(\frac{\textbf{W}}{4}\)1,151 million, respectively.

Dividends received from equity method investees for the years ended December 31, 2016, 2017 and 2018 amounted to W59,820 million, W8,639 million and W5,272 million, respectively.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

8. <u>Investments in Equity Accounted Investees, Continued</u>

- (b) Summary of financial information of the significant associate as of December 31, 2017 and 2018 and for the years ended December 31, 2016, 2017 and 2018 are as follows:
 - (i) Paju Electric Glass Co., Ltd.

(In millions of won)	December 31, 2017	December 31, 2018
Total assets	₩ 193,584	194,021
Current assets	146,702	128,788
Non-current assets	46,882	65,233
Total liabilities	77,174	72,686
Current liabilities	71,973	66,797
Non-current liabilities	5,201	5,889

(In millions of won)	2016	2017	2018
Revenue	W 549,559	408,846	384,144
Profit for the year	21,082	12,327	12,744
Other comprehensive income (loss)	16,477	(9,366)	2,612
Total comprehensive income	37,559	2,961	15,356

- (c) Reconciliation from financial information of the significant associate to its carrying value in the consolidated financial statements as of December 31, 2017 and 2018 is as follows:
 - (i) As of December 31, 2017

(In millions of won)

			Net asset (applying			
		Ownership	ownership		Intra-group	Book
Company	Net asset	interest	interest)	Goodwill	transaction	value
Paju Electric Glass Co., Ltd.	W 116,410	40%	46,564		(53)	46,511

(ii) As of December 31, 2018

			Net asset (applying			
		Ownership	ownership		Intra-group	Book
Company	Net asset	interest	interest)	Goodwill	transaction	value
Paju Electric Glass Co., Ltd.	W 121,335	40%	48,534		(711)	47,823

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

8. <u>Investments in Equity Accounted Investees, Continued</u>

- (d) Book value of other associates, in aggregate, as of December 31, 2017 and 2018 is as follows:
 - (i) As of December 31, 2017

(In millions of won)

		interest)				
		Profit for	Other comprehensive	Total comprehensive		
	Book value	the year	income	income		
Other associates	W 75,996	3,943	5,093	9,036		

(ii) As of December 31, 2018

(Net profit (loss) of associates (applying ownership interest)				
		Profit (loss)	Other comprehensive	Total comprehensive		
	Book value	for the year	income (loss)	income (loss)		
Other associates	W 66,166	(3,739)	(988)	(4,727)		

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

8. <u>Investments in Equity Accounted Investees, Continued</u>

(e) Changes in investments in associates accounted for using the equity method for the years ended December 31, 2017 and 2018 are as follows:

(In millions of won)

(2017			
Company		January 1	Acquisition/ Disposal	Dividends received	Equity income on investments	Other comprehensive income (loss)	Other gain (loss)	December 31
Associates	Paju Electric							
	Glass Co., Ltd.	₩ 52,750	_	(8,109)	5,617	(3,747)	_	46,511
	Others	119,933	(48,209)	(530)	3,943	5,093	(4,234)	75,996
		₩ 172,683	(48,209)	(8,639)	9,560	1,346	(4,234)	122,507

, ,					2018			_
Company		January 1	Acquisition/ Disposal	Dividends received	Equity income (loss) on investments	Other comprehensive income (loss)	Other gain (loss)	December 31
Associates	Paju Electric							
	Glass Co., Ltd.	₩ 46,511	_	(4,172)	4,439	1,045	_	47,823
	Others	75,996	12,592	(1,100)	(3,739)	(988)	(16,595)	66,166
		₩ 122,507	12,592	(5,272)	700	57	(16,595)	113,989

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

9. Property, Plant and Equipment

(a) Changes in property, plant and equipment for the year ended December 31, 2017 are as follows:

(in mutions of won)	Land	Buildings and structures	Machinery and equipment	Furniture and fixtures	Construction- in-progress (*1)	Others	Total
Acquisition cost as of January 1, 2017	W 461,484	6,284,778	37,472,177	775,682	2,981,964	202,306	48,178,391
Accumulated depreciation as of	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	., . ,	, . ,	,	<i>y y</i>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	., ,
January 1, 2017	_	(2,397,967)	(32,947,359)	(651,424)	_	(146,251)	(36,143,001)
Accumulated impairment loss as of							
January 1, 2017		(1,651)	(2,290)				(3,941)
Book value as of January 1, 2017	W 461,484	3,885,160	4,522,528	124,258	2,981,964	56,055	12,031,449
Additions	_	_		_	7,272,476	_	7,272,476
Depreciation		(295,045)	(2,416,202)	(66,963)		(13,673)	(2,791,883)
Disposals	(1,042)	(7,206)	(75,275)	(52)	_	(3,133)	(86,708)
Others(*2)	69	339,640	3,825,155	87,186	(4,270,210)	18,160	
Effect of movements in exchange rates	_	(63,222)	(140,306)	(3,087)	(14,213)	(687)	(221,515)
Government grants received		(548)	(3,150)		1,839		(1,859)
Book value as of December 31, 2017	₩ 460,511	3,858,779	5,712,750	141,342	5,971,856	56,722	16,201,960
Acquisition cost as of December 31,							
2017	₩ 460,511	6,539,506	38,901,158	772,824	5,971,856	205,475	52,851,330
Accumulated depreciation as of							
December 31, 2017	W —	(2,678,970)	(33,186,118)	(631,482)		(148,753)	(36,645,323)
Accumulated impairment loss as of							
December 31, 2017	W	(1,757)	(2,290)				(4,047)

^(*1) As of December 31, 2017, construction-in-progress mainly relates to construction of manufacturing facilities.

^(*2) Others are mainly amounts transferred from construction-in-progress.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

9. Property, Plant and Equipment, Continued

(b) Changes in property, plant and equipment for the year ended December 31, 2018 are as follows:

(In millions of won)			Buildings and	Machinery and	Furniture and	Construction- in-progress		m
A: -: ti	117	Land	structures	equipment	fixtures	(*1)	Others	Total
Acquisition cost as of January 1, 2018	₩	460,511	6,539,506	38,901,158	772,824	5,971,856	205,475	52,851,330
Accumulated depreciation as of			(2 (70 070)	(22 10(110)	((21, 492)		(1.40.752)	(2.6, 6.45, 2.22)
January 1, 2018		_	(2,678,970)	(33,186,118)	(631,482)		(148,753)	(36,645,323)
Accumulated impairment loss as of			(1.757)	(2.200)				(4.045)
January 1, 2018			(1,757)	(2,290)				(4,047)
Book value as of January 1, 2018	₩	460,511	3,858,779	5,712,750	141,342	5,971,856	56,722	16,201,960
Additions		—	_	_	_	8,605,551	_	8,605,551
Depreciation		_	(318,311)	(2,568,335)	(67,274)	_	(169,739)	(3,123,659)
Disposals		(15)	(161)	(112,752)	(311)	_	(2,971)	(116,210)
Impairment loss		_		(25,711)		(17,890)		(43,601)
Others(*2)		1,332	55,430	1,959,645	68,177	(2,357,412)	380,278	107,450
Effect of movements in exchange								
rates		_	9,809	14,520	359	15,010	312	40,010
Government grants received		_	_	(1,029)	_	(181)	_	(1,210)
Reclassification to assets								
held-for-sale			(69,758)	(1)	(37)		(365)	(70,161)
Book value as of December 31, 2018	W	461,828	3,535,788	4,979,087	142,256	12,216,934	264,237	21,600,130
Acquisition cost as of December 31, 2018	W	461,828	6,528,939	39,825,070	834,628	12,234,824	633,220	60,518,509
Accumulated depreciation as of December 31, 2018	W		(2,991,445)	(34,817,982)	(692,372)		(368,893)	(38,870,782)
Accumulated impairment loss as of December 31, 2018	W		(1,706)	(28,001)		(17,890)		(47,597)

^(*1) As of December 31, 2018, construction-in-progress mainly relates to construction of manufacturing facilities.

(c) Capitalized borrowing costs and capitalization rate for the years ended December 31, 2016, 2017 and 2018 are as follows:

	2016	2017	2018
Capitalized borrowing costs	W 16,909	47,686	146,607
Capitalization rate	2.91%	1.92%	2.80%

^(*2) Others are mainly amounts transferred from construction-in-progress.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

10. <u>Intangible Assets</u>

(a) Changes in intangible assets for the year ended December 31, 2017 are as follows:

(In millions of won)	р	tellectual roperty rights	Software	Member-	Development costs	Construction- in-progress (software)	Customer relationships	Technology	Good-will(*2)	Others (*3)	Total
Acquisition cost as of January 1, 2017	W	904,664	806,835	51,564	1,433,791	18,738	59,176	11,074	110,072	13,077	3,408,991
Accumulated amortization as of January 1, 2017		(618,398)	(661,063)	_	(1,177,451)	_	(26,678)	(7,382)	_	(13,071)	(2,504,043)
Accumulated impairment loss as of January 1, 2017				(10,011)							(10,011)
Book value as of January 1, 2017	₩	286,266	145,772	41,553	256,340	18,738	32,498	3,692	110,072	6	894,937
Additions - internally developed		_	_	_	336,207	_	_	_	_	_	336,207
Additions - external purchases		22,746	_	4,819	_	108,761	_	_	_	_	136,326
Amortization(*1)		(42,195)	(78,939)	_	(295,787)	_	(4,659)	(1,108)	_	(5)	(422,693)
Disposals		(4)	_	(1,392)	_	_	_	_	_	_	(1,396)
Impairment loss		_	_	(1,809)	_	_	_	_	_	_	(1,809)
Reversal of impairment loss		_	_	35	_	_	_	_	_	_	35
Transfer from construction-in-progress	S	_	98,989	_	_	(98,989)	_	_	(3,218)	_	(3,218)
Effect of movements in exchange rates		(19,847)	(4,332)	(6)		2,423			(3,806)		(25,568)
Book value as of December 31, 2017	W	246,966	161,490	43,200	296,760	30,933	27,839	2,584	103,048	1	912,821
Acquisition cost as of December 31, 2017	W	895,721	898,278	54,985	1,769,998	30,933	59,176	11,074	103,048	13,077	3,836,290
Accumulated amortization as of December 31, 2017	W	(648,755)	(736,788)		(1,473,238)		(31,337)	(8,490)		(13,076)	(2,911,684)
Accumulated impairment loss as of December 31, 2017	₩			(11,785)							(11,785)

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

10. Intangible Assets, Continued

- (*1) The Group has classified the amortization as manufacturing overhead costs, selling expenses, administrative expenses and research and development expenses.
- (*2) As of December 31, 2017, the book value of goodwill decreased by \(\frac{\psi}{3}\), 218 million as the Group completed the fair value measurement of land use right, acquired from business combination during the year ended December 31, 2016.
- (*3) Others mainly consist of rights to use electricity and gas supply facilities.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

10. Intangible Assets, Continued

(b) Changes in intangible assets for the year ended December 31, 2018 are as follows:

(In millions of won)	Intellectual property rights	Software	Member- ships	Development costs	Construction- in-progress (software)	Customer relationships	Technology	Good- will	Others (*2)	Total
Acquisition cost as of January 1, 2018	₩ 895,721	898,278	54,985	1,769,998	30,933	59,176	11,074	103,048	13,077	3,836,290
Accumulated amortization as of January 1, 2018	(648,755)	(736,788)	_	(1,473,238)	_	(31,337)	(8,490)	_	(13,076)	(2,911,684)
Accumulated impairment loss as of January 1, 2018			(11,785)							(11,785)
Book value as of January 1, 2018	₩ 246,966	161,490	43,200	296,760	30,933	27,839	2,584	103,048	1	912,821
Additions - internally developed	_	_	_	372,835	_	_	_	_	_	372,835
Additions - external purchases	24,596	_	2,844	_	100,820	_	_	_	_	128,260
Amortization(*1)	(43,437)	(80,159)	— (531)	(302,685)	_	(3,517)	(1,107)	_	(1)	(430,906)
Disposals Impairment loss	_	_	(721) (82)	_	_	_	_	_		(721) (82)
Reversal of impairment loss			348							348
Transfer from construction-in-progress Effect of movements in	_	95,028	449	_	(95,028)	_	_	_	_	449
exchange rates	1,896	1,240	1		238			1,263		4,638
Book value as of December 31, 2018	₩ 230,021	177,599	46,039	366,910	36,963	24,322	1,477	104,311		987,642
Acquisition cost as of December 31, 2018	₩ 926,969	992,139	57,560	2,142,832	36,963	59,176	11,075	104,311	13,077	4,344,102
Accumulated amortization as of December 31, 2018	₩ (696,948)	(814,540)		(1,775,922)		(34,854)	(9,598)		(13,077)	(3,344,939)
Accumulated impairment loss as of December 31, 2018	<u>₩</u>		(11,521)							(11,521)

^(*1) The Group has classified the amortization as manufacturing overhead costs, selling expenses, administrative expenses and research and development expenses.

^(*2) Others mainly consist of rights to use electricity and gas supply facilities.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

10. Intangible Assets, Continued

- (c) Development of new projects are divided into research activities and development activities. Expenditures on research activities are recognized in profit or loss and qualifying development expenditures are capitalized, respectively.
- (d) Development costs as of December 31, 2017 and 2018 are as follows:
 - (i) As of December 31, 2017

(In millions of won and in years)

Classification	Product	Book Value	Remaining Useful life
	Mobile	₩ 79,372	0.6
Development	TV	36,038	0.6
completed	Notebook	14,311	0.5
	Others	12,444	0.4
	Sub-Total	₩ 142,165	
	Mobile	₩ 117,222	_
Development	TV	30,670	_
in process	Notebook	2,356	_
	Others	4,347	—
	Sub-Total	₩ 154,595	
	Total	₩ 296,760	

(ii) As of December 31, 2018

(In millions of won and in years)

Classification	Product	Book Value	Remaining Useful life
	Mobile	₩ 108,467	0.5
Development	TV	28,001	0.5
completed	Notebook	4,458	0.6
	Others	9,475	0.5
	Sub-Total	₩ 150,401	
	Mobile	₩ 144,679	_
Development	TV	55,580	_
in process	Notebook	9,639	
	Others	6,611	
	Sub-Total	₩ 216,509	
	Total	₩ 366,910	

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

11. Financial Liabilities

(a) Financial liabilities at the reporting date are as follows:

	December 31, 2017	December 31, 2018
Current		
Current portion of long-term borrowings and		
bonds	₩ 1,452,926	1,553,907
	W 1,452,926	1,553,907
Non-current		
Won denominated borrowings	₩ 1,251,258	2,700,608
Foreign currency denominated borrowings	1,392,931	2,531,663
Bonds	1,506,003	1,772,599
Derivatives(*)		25,758
	₩ 4,150,192	7,030,628
Bonds	1,506,003	1,772,599 25,758

- (*) Represents exchange rate swap contracts related to foreign currency denominated borrowings and bonds.
 - (b) Won denominated long-term borrowings at the reporting date are as follows:

(In millions of won) Lender	Annual interest rate as of December 31, 2018 (%)	Dec	ember 31, 2017	December 31, 2018
Woori Bank	3-year Korean Treasury			
	Bond rate -2.75	₩	1,922	1,259
Shinhan Bank	<u>—</u>		200,000	_
Korea Development Bank and others	CD rate (91days) + 0.64, 2.43~3.25		1,250,000	2,850,000
Less current portion of long-term				
borrowings			(200,664)	(150,651)
		₩ :	1,251,258	2,700,608

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

11. Financial Liabilities, Continued

(c) Foreign currency denominated long-term borrowings at the reporting date are as follows:

(In millions of won and USD, CNY)	Annual interest rate as of	December 31,	December 31,
Lender	December 31, 2018 (%)(*)	2017	2018
The Export-Import Bank of			
Korea	3ML+0.75~1.70	₩ 755,337	955,975
China Construction Bank and	USD: 3ML+0.80~2.00		
others	CNY: PBOC*(0.90~1.05)	1,385,097	2,419,286
Foreign currency equivalent		USD 1,500	USD 2,262
		CNY 3,263	CNY 5,198
Less current portion of long-			
term borrowings		₩ (747,503)	(843,598)
		₩ 1,392,931	2,531,663

- (*) ML represents Month LIBOR (London Inter-Bank Offered Rates) and PBOC represents People's Bank of China.
 - (d) Details of bonds issued and outstanding at the reporting date are as follows:

(In millions of won)		Annual interest rate as of	December 31,	December 31,
	Maturity	December 31, 2018 (%)	2017	2018
Won denominated bonds(*1)				
Publicly issued bonds	April 2019 ~ February 2023	1.80~3.45	₩ 2,015,000	1,900,000
Privately issued bonds	May 2025 ~ May 2033	3.25~4.25	_	110,000
Less discount on bonds			(4,238)	(3,949)
Less current portion			(504,759)	(559,658)
			₩ 1,506,003	1,446,393
Foreign currency denominated bond(*2)				
Publicly issued bond	November 2021	3.88	₩ —	335,430
Foreign currency				
equivalent			_	USD 300
Less discount on bonds			_	(9,224)
			₩ —	326,206
			₩ 1,506,003	1,772,599

^(*1) Principal of the won denominated bonds is to be repaid at maturity and interests are paid quarterly.

^(*2) Principal of the foreign currency denominated bond is to be repaid at maturity and interests are paid semi-annually.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

12. Employee Benefits

The Controlling Company and certain subsidiaries' defined benefit plans provide a lump-sum payment to an employee based on final salary rates and length of service at the time the employee leaves the Controlling Company or certain subsidiaries.

The defined benefit plans expose the Group to actuarial risks, such as the risk associated with expected periods of service, interest rate risk, market (investment) risk, and others.

(a) Net defined benefit liabilities recognized at the reporting date are as follows:

(In millions of won)

	December 31, 2017	December 31, 2018
Present value of partially funded defined benefit		
obligations	₩ 1,562,424	1,595,423
Fair value of plan assets	(1,466,977)	(1,550,063)
	W 95,447	45,360

(b) Changes in the present value of the defined benefit obligations for the years ended December 31, 2017 and 2018 are as follows:

(In millions of won)

	2017	2018
Opening defined benefit obligations	W 1,401,396	1,562,424
Current service cost	195,850	204,668
Past service cost	_	(25,749)
Interest cost	40,844	49,145
Remeasurements (before tax)	(114)	(27,885)
Benefit payments	(76,011)	(88,562)
Transfers from (to) related parties	534	(4,217)
Curtailment of plans	_	(74,459)
Others	(75)	58
Closing defined benefit obligations	₩ 1,562,424	1,595,423

Weighted average remaining maturity of defined benefit obligations as of December 31, 2017 and 2018 are 14.0 years and 14.4 years, respectively.

(c) Changes in fair value of plan assets for the years ended December 31, 2017 and 2018 are as follows:

	2017	2018
Opening fair value of plan assets	W 1,258,409	1,466,977
Expected return on plan assets	38,453	48,184
Remeasurements (before tax)	(16,374)	(22,195)
Contributions by employer directly to plan assets	250,998	212,224
Benefit payments	(64,509)	(80,690)
Curtailment of plans		(74,437)
Closing fair value of plan assets	W 1,466,977	1,550,063

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

12. Employee Benefits, Continued

(d) Plan assets at the reporting date are as follows:

(In millions of won)

	December 31, 2017	December 31, 2018
Guaranteed deposits in banks	W 1,466,977	1,550,063

As of December 31, 2018, the Controlling Company maintains the plan assets with Mirae Asset Securities Co., Ltd., KB Insurance Co., Ltd. and others.

The Group's estimated additional contribution to the plan assets for the year ending December 31, 2019 is \(\frac{\psi}{63}\),688 million.

(e) Expenses recognized in profit or loss for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of won)	2016	2017	2018
Current service cost	₩ 210,682	195,850	204,668
Past service cost			(25,749)
Net interest cost	10,280	2,391	961
	₩ 220,962	198,241	179,880

Expenses are recognized in the following line items in the consolidated statements of comprehensive income:

(In millions of won)	2016	2017	2018
Cost of sales	₩ 177,652	158,418	134,879
Selling expenses	12,513	11,114	11,045
Administrative expenses	16,486	16,287	19,472
Research and development expenses	14,311	12,422	14,484
	₩ 220,962	198,241	179,880

(f) Remeasurements of net defined benefit liabilities (assets) included in other comprehensive income (loss) for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of won)	2016	2017	2018
Balance at January 1	W (281,902)	(163,950)	(170,510)
Remeasurements			
Actuarial profit or loss arising from:			
Experience adjustment	70,258	(48,890)	56,225
Demographic assumptions	(4,605)	(7,702)	(15,379)
Financial assumptions	95,429	56,706	(12,961)
Return on plan assets	(5,736)	(16,374)	(22,195)
Share of associates regarding remeasurements	200	441	20
	155,546	(15,819)	5,710
Income tax	(37,594)	9,259	(1,169)
Balance at December 31	₩ (163,950)	(170,510)	(165,969)
Financial assumptions Return on plan assets Share of associates regarding remeasurements Income tax	95,429 (5,736) 200 155,546 (37,594)	56,706 (16,374) 441 (15,819) 9,259	(12,961 (22,195 20 5,710 (1,169

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

12. Employee Benefits, Continued

(g) Principal actuarial assumptions at the reporting date (expressed as weighted averages) are as follows:

	2017	2018
Expected rate of salary increase	4.7%	4.3%
Discount rate for defined benefit obligations	3.2%	2.8%

Assumptions regarding future mortality are based on published statistics and mortality tables. The current mortality underlying the values of the liabilities in the defined benefit plans are as follows:

		December 31, 2017	December 31, 2018
Teens	Males	0.01%	0.01%
	Females	0.00%	0.00%
Twenties	Males	0.01%	0.01%
	Females	0.00%	0.00%
Thirties	Males	0.01%	0.01%
	Females	0.01%	0.01%
Forties	Males	0.03%	0.03%
	Females	0.02%	0.02%
Fifties	Males	0.05%	0.05%
	Females	0.02%	0.02%

(h) Reasonably possible changes to respective relevant actuarial assumptions would have affected the defined benefit obligations by the following amounts as of December 31, 2018:

(In millions of won)	Defined benefi	Defined benefit obligation		
	1% increase	1% decrease		
Discount rate for defined benefit obligations	₩ (199,750)	241,608		
Expected rate of salary increase	236,002	(199,363)		

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

13. Provisions

Changes in provisions for the year ended December 31, 2017 are as follows:

(In millions of won)

	Litigation and claims	Warranties(*)	Others	Total
Balance of January 1, 2017	₩ —	62,462	1,665	64,127
Additions	43	251,131	170	251,344
Usage and reclassification	_	(211,143)	_	(211,143)
Balance at December 31, 2017	W 43	102,450	1,835	104,328
Current	₩ 43	74,138	1,835	76,016
Non-current	₩ —	28,312		28,312

Changes in provisions for the year ended December 31, 2018 are as follows:

	Litigations and claims	Warranties(*)	Others	Total
Balance at January 1, 2018	₩ 43	102,450	1,835	104,328
Adjustment from adoption of IFRS 15	_		9,789	9,789
Additions (reversals)	_	234,928	(2,694)	232,234
Usage	(43)	(215,290)		(215,333)
Balance at December 31, 2018	W —	122,088	8,930	131,018
Current	W —	89,324	8,930	98,254
Non-current	₩ —	32,764		32,764

^(*) The provision for warranties covers defective products and is normally applicable for 18 months from the date of purchase. The warranty liability is calculated by using historical and anticipated rates of warranty claims, and costs per claim to satisfy the Group's warranty obligation.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

14. Other Liabilities

Other liabilities at the reporting date are as follows:

	December 31, 2017		December 31, 2018
Current liabilities			
Withholdings	₩	63,766	30,970
Unearned revenues		12,225	43,841
Security deposits			165
	₩	75,991	74,976
Non-current liabilities			
Long-term accrued expenses	W	70,561	80,817
Long-term other accounts payable		2	3,103
Long-term unearned revenue		_	2,116
Security deposits			10,790
	₩	70,563	96,826

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

15. Contingent Liabilities and Commitments

(a) Legal Proceedings

Anti-trust litigations

Argos Limited and affiliated companies ("Argos") filed a Notice of Claim against the Controlling Company and LG Display Taiwan Co., Ltd. in the High Court of Justice in London alleging infringement of Treaty on the Functioning of the European Union and Agreement on the European Economic Area. The Controlling Company and LG Display Taiwan Co., Ltd. reached a settlement with Argos in November 2018.

Others

The Group is defending against various claims in addition to pending proceedings described above. The Group does not have a present obligation for these matters and has not recognized any provision at December 31, 2018.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

15. Contingent Liabilities and Commitments, Continued

(b) Commitments

Factoring and securitization of accounts receivable

The Controlling Company has agreements with Korea Development Bank and several other banks for accounts receivable sales negotiating facilities of up to an aggregate of USD1,670 million (\text{W1,867,227 million}) in connection with the Controlling Company's export sales transactions with its subsidiaries. As of December 31, 2018, no short-term borrowings were outstanding in connection with these agreements. In connection with all of the contracts mentioned above, the Controlling Company has sold its accounts receivable with recourse.

The Controlling Company and oversea subsidiaries entered into agreements with financial institutions for accounts receivables sales negotiating facilities. The respective maximum amount of accounts receivables sales and the amount of sold accounts receivables before maturity by contract are as follows:

(In millions of USD and KRW)

Classification	Financial institutions	Maximum		Not yet due			
			ractual lount	KRW equivalent		actual ount	KRW equivalent
Controlling Company		KRW	90,000	90,000		,	
	Shinhan Bank	USD	25	27,953	USD	12	13,286
	Sumitomo Mitsui Banking Corporation	USD	20	22,362		_	
		KRW	130,000	130,000	KRW	36,089	36,089
	Bank of Tokyo-Mitsubishi UFJ	USD	40	44,724	USD	40	44,516
	BNP Paribas	USD	200	223,620	USD	12	13,630
	ING Bank	USD	150	167,715	USD	31	35,554
		USD	435		USD	95	
		KRW	220,000	706,374	KRW	36,089	143,075
Subsidiaries							
LG Display Singapore Pte.							
Ltd.	Standard Chartered Bank	USD	300	335,430	USD	209	233,364
LG Display Taiwan Co.,							
Ltd.	BNP Paribas	USD	52	58,141	USD	9	10,063
	Australia and New Zealand Banking						
	Group Ltd	USD	70	78,267	USD	52	58,142
	Taishin International Bank	USD	289	323,131	USD	86	96,157
LG Display Germany GmbH	Citibank	USD	160	178,896			
	BNP Paribas	USD	75	83,858	USD	75	83,767
LG Display America, Inc.	Hongkong & Shanghai Banking Corp.	USD	400	447,240	USD	230	257,164
	Standard Chartered Bank	USD	600	670,860	USD	515	575,823
	Sumitomo Mitsui Banking Corporation	USD	80	89,448	USD	67	74,915
LG Display Japan Co., Ltd.	Sumitomo Mitsui Banking Corporation	USD	20	22,362			_
LG Display Guangzhou	Industrial and Commercial Bank of						
Trading Co., Ltd.	China						
		USD	2,046	2,287,633	USD	1,243	1,389,395
		USD	2,481		USD	1,338	
		KRD	220,000	2,994,007	KRW	36,089	1,532,470

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

15. Contingent Liabilities and Commitments, Continued

(b) Commitments, Continued

In connection with all of the contracts in the above table, the Controlling Company has sold its accounts receivable without recourse.

Letters of credit

As of December 31, 2018, the Controlling Company has agreements in relation to the opening of letters of credit up to USD 30 million (\(\frac{\pi}{3}\)3,543 million) with KEB Hana Bank, USD 80 million (\(\frac{\pi}{8}\)9,448 million) with Bank of China and USD 50 million (\(\frac{\pi}{5}\)5,905 million) with Sumitomo Mitsui Banking Corporation.

Payment guarantees

The Controlling Company obtained payment guarantees amounting to USD 1,538 million (\(\foldag{W}\)1,719,079 million) from KEB Hana Bank and others for advance received related to the long-term supply agreements. The Controlling Company also obtained payment guarantees amounting to USD 306 million (\(\foldag{W}\)341,929 million) from Korea Development Bank for foreign currency denominated bonds and USD 8.5 million (\(\foldag{W}\)9,504 million) from Shinhan Bank for value added tax payments in Poland.

LG Display (China) Co., Ltd. and other subsidiaries are provided with payment guarantees from the China Construction Bank and other various banks amounting to CNY1,711 million (\(\mathbb{W}\)278,401 million), JPY 900 million (\(\mathbb{W}\)9,119 million), EUR 2.5 million (\(\mathbb{W}\)3,198 million), VND 40,498 million (\(\mathbb{W}\)1,952 million), USD 0.5 million (\(\mathbb{W}\)559 million), PLN 0.1 million (\(\mathbb{W}\)30 million) and, respectively, for their local tax payments and utility payments.

License agreements

As of December 31, 2018, in relation to its LCD business, the Group has technical license agreements with Hitachi Display, Ltd. and others and has a trademark license agreement with LG Corp.

Long-term supply agreement

As of December 31, 2018, in connection with long-term supply agreements with customers, the Controlling Company recognized USD 1,475 million (\overline{W}1,649,198 million) in advances received. The advances received will be offset against outstanding accounts receivable balances after a given period of time, as well as those arising from the supply of products thereafter.

The Controlling Company received payment guarantees amounting to USD 1,538 million (\(\psi\)1,719,079 million) from KEB Hana Bank and other various banks relating to advance received.

Pledged Assets

Regarding the secured bank loan amounting to USD 240 million (\wxtbf{\psi}268,093 million) from China Construction Bank, as of December 31, 2018, the Group provided its property, plant and equipment and others with carrying amount of \wxtbf{\psi}146,262 million as pledged assets.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

16. Capital and Reserves

(a) Share capital

The Controlling Company is authorized to issue 500,000,000 shares of capital stock (par value \scalebox 5,000), and as of December 31, 2017 and December 31, 2018, the number of issued common shares is 357,815,700. There have been no changes in the capital stock from January 1, 2016 to December 31, 2018.

(b) Reserves

Reserves consist mainly of the following:

Translation reserve

(In millions of won)

The translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign operations.

Other comprehensive income (loss) from associates

The other comprehensive income (loss) from associates comprises the amount related to change in equity of investments in equity accounted investees.

Reserves at the reporting date are as follows:

(an initial of work)	Decem	ber 31, 2017	December 31, 2018
Foreign currency translation differences for foreign			
operations	W	(259,749)	(272,474)
Other comprehensive loss from associates			
(excluding remeasurements of net defined benefit			

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

16. Capital and Reserves, Continued

(b) Reserves, Continued

The movement in reserves for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In mutons of won)	val availa	nge in fair ue of ble-for- ncial assets	Foreign currency translation differences for foreign operations	Other comprehensive income (loss) from associates (excluding remeasurements)	Total
January 1, 2016	₩	58	18,196	(24,020)	(5,766)
Change in reserves		(58)	(77,238)	(5,416)	(82,712)
December 31, 2016		_	(59,042)	(29,436)	(88,478)
January 1, 2017		_	(59,042)	(29,436)	(88,478)
Change in reserves		_	(200,707)	905	(199,802)
December 31, 2017		_	(259,749)	(28,531)	(288,280)
January 1, 2018		_	(259,749)	(28,531)	(288,280)
Change in reserves		_	(12,725)	37	(12,688)
December 31, 2018		_	(272,474)	(28,494)	(300,968)

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

17. Geographic and Other Information

The following is a summary of sales by region based on the location of the customers for the years ended December 31, 2016, 2017 and 2018.

(a) Revenue by geography

(In millions of won)

Region	2016	2017	2018
Domestic	₩ 1,825,191	1,996,183	1,589,452
Foreign			
China	18,367,767	18,090,974	15,242,533
Asia (excluding China)	2,148,676	2,383,390	2,481,112
United States	2,053,317	2,724,714	2,462,918
Europe (excluding Poland)	983,672	1,433,126	1,496,138
Poland	1,125,451	1,161,829	1,064,418
	24,678,883	25,794,033	22,747,119
	₩ 26,504,074	27,790,216	24,336,571

Sales to Company A and Company B amount to \(\pi\)7,262,255 million and \(\pi\)5,171,354 million, respectively, for the year ended December 31, 2018 (2016: \(\pi\)9,122,385 million and \(\pi\)5,808,630 million, 2017: \(\pi\)9,027,165 million and \(\pi\)6,511,961 million). The Group's top ten end-brand customers together accounted for 77% of sales for the year ended December 31, 2018 (2016: 82%, 2017: 81%).

(b) Non-current assets by geography

	Decem	December 31, 2017		1, 2018
Region	Property, plant equipment	and Intangible assets	Property, plant and equipment	Intangible assets
Domestic	₩ 12,487,1	731,373	14,984,688	816,808
Foreign				
China	2,929,7	17,244	5,049,216	12,332
Others	785,1	10 164,204	1,566,226	158,502
	W 3,714,8	181,448	6,615,442	170,834
	₩ 16,201,9	912,821	21,600,130	987,642

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

17. Geographic and Other Information, Continued

(c) Revenue by product and services

(In millions of won)

Product	2016	2017	2018
Panels for:			
Televisions	₩ 10,132,520	11,717,982	9,727,260
Desktop monitors	4,035,195	4,393,482	4,040,025
Tablet products	2,695,808	2,369,634	1,990,766
Notebook computers	2,383,532	2,244,088	2,836,888
Mobile and others	7,257,019	7,065,030	5,741,632
	W 26,504,074	27,790,216	24,336,571

18. The Nature of Expenses and Others

The classification of expenses by nature for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of won)

	2016	2017	2018
Changes in inventories	W 63,884	(62,299)	(341,120)
Purchases of raw materials, merchandise and others	14,244,942	13,548,848	12,863,812
Depreciation and amortization	3,021,571	3,214,576	3,554,565
Outsourcing fees	819,742	771,697	825,393
Labor costs	3,022,607	3,258,427	3,222,110
Supplies and others	1,053,245	1,239,915	1,010,352
Utility	840,664	865,347	899,075
Fees and commissions	638,732	692,125	722,134
Shipping costs	224,742	249,820	240,288
Advertising	67,636	236,440	112,400
Warranty expenses	166,691	251,131	234,928
Travel	73,807	92,976	104,009
Taxes and dues	74,506	91,806	123,210
Others	927,218	919,051	757,673
	₩ 25,239,987	25,369,860	24,328,829

Total expenses consist of cost of sales, selling, administrative, research and development expenses and other non-operating expenses, excluding foreign exchange differences.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

19. Selling and Administrative Expenses

Details of selling and administrative expenses for the years ended December 31, 2016, 2017, and 2018 are as follows:

(In millions of won)

	2016	2017	2018
Salaries(*1)	W 276,824	327,288	500,610
Expenses related to defined benefit plans(*2)	28,999	27,401	30,724
Other employee benefits	89,717	94,740	90,348
Shipping costs	191,442	214,866	200,434
Fees and commissions	192,786	197,070	221,050
Depreciation	129,225	138,711	174,575
Taxes and dues	30,523	46,317	65,621
Advertising	67,636	236,440	112,400
Warranty expenses	166,691	251,131	234,928
Rent	25,840	26,711	26,691
Insurance	11,561	12,459	11,584
Travel	23,343	27,879	24,659
Training	14,464	16,311	13,309
Others	56,342	73,181	65,343
	₩ 1,305,393	1,690,505	1,772,276

- (*1) The expense related to retirement allowance for the year ended December 31, 2018 is \(\prec{\psi}{184,941}\) million.
- (*2) The expense related to the define contribution plan for the year ended December 31, 2018 is \(\frac{\text{W}}{111}\) million.

20. Personnel Expenses

Details of personnel expenses for the years ended December 31, 2016, 2017 and 2018 are as follows:

 $(In\ millions\ of\ won)$

	2016	2017	2018
Salaries and wages	W 2,418,869	2,704,217	2,720,014
Other employee benefits	459,730	483,704	500,169
Contributions to National Pension plan	69,588	73,061	75,668
Expenses related to defined benefit plan and defined contribution			
plan(*)	220,962	198,241	180,737
	W 3,169,149	3,459,223	3,476,588

(*) The expense related to the define contribution plan for the year ended December 31, 2018 is \(\frac{\text{W}}{857}\) million.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

21. Other Income and Other Expenses

(a) Details of other income for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of won)

-01/	2018
969,425	970,306
101,227	6,620
308	239
35	348
2,212	3,584
8,539	23,040
1,081,746	1,004,037
	101,227 308 35 2,212 8,539

(b) Details of other expenses for the years ended December 31, 2016, 2017 and 2018 are as follows:

2016	2017	2018
W 1,420,502	1,189,193	1,030,084
_	1,798	4
7,466	20,030	15,048
1,610	_	43,601
75	30	
138	1,809	82
22,221	17,152	7,698
15,819	443	18,716
₩ 1,467,831	1,230,455	1,115,233
	₩ 1,420,502 	₩ 1,420,502

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

22. Finance Income and Finance Costs

(a) Finance income and costs recognized in profit or loss for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of worl)	2016	2017	2018
Finance income			
Interest income	₩ 42,079	60,106	69,020
Foreign currency gain	81,554	210,890	160,989
Gain on disposal of investments in equity accounted investees	11,367	3,669	
Reversal of impairment loss of investments in equity accounted investees	_	_	802
Gain on transaction of derivatives	4,427	3,106	2,075
Gain on valuation of derivatives	244	1,070	13,059
Gain on disposal of available-for-sale financial assets		8	
Gain on valuation of financial asset at fair value through profit or loss	_	170	8,186
	₩ 139,671	279,019	254,131
Finance costs			
Interest expense	₩ 113,285	90,538	80,517
Foreign currency loss	132,320	126,642	184,309
Loss on disposal of investments in equity accounted investees	5,643	42,112	595
Loss on impairment of investments in equity accounted investees	6,137	4,234	17,397
Loss on impairment of available-for-sale financial assets	3,757	1,948	
Loss on valuation of financial asset at fair value through profit or loss	118	_	225
Loss on sale of trade accounts and notes receivable	2,886	784	13,361
Loss on transaction of derivatives	334	514	49
Loss on valuation of derivatives	472		26,600
Others	1,234	2,084	3,840
	W 266,186	268,856	326,893

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

22. Finance Income and Finance Costs, Continued

(b) Finance income and costs recognized in other comprehensive income or loss for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of won)

	2016	2017	2018
Foreign currency translation differences for foreign operations	$\overline{W(90,503)}$	(231,738)	(19,987)
Net change in fair value of available-for-sale financial assets	(77)		
Tax effect	19		
Finance income (costs) recognized in other comprehensive income			
(loss) after tax	$\frac{\text{W}(90,561)}{\text{W}(90,561)}$	(231,738)	(19,987)

23. Income Taxes

(a) Details of income tax expense (benefit) for the years ended December 31, 2016, 2017 and 2018 are as follows:

2016	2017	2018
361,237	512,123	167,394
_	_	82,225
361,237	512,123	249,619
(49,190)	(104,835)	(226,360)
72,678	(11,708)	64,818
23,488	(116,543)	(161,542)
384,725	395,580	88,077
		361,237 512,123 — — — — — — — — — — — — — — — — — — —

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

23. <u>Income Taxes, Continued</u>

(b) Income taxes recognized directly in other comprehensive income or loss for the years ended December 31, 2016, 2017, and 2018 are as follows:

(In millions of won)		2016 Tax benefit		
	Before tax		(expense)	Net of tax
Net change in fair value of available-for-sale financial assets	W	(77)	19	(58)
Remeasurements of net defined benefit liabilities (assets)		155,346	(37,594)	117,752
Foreign currency translation differences for foreign operations		(90,503)	-	(90,503)
Change in equity of equity method investee		(5,216)		(5,216)
	₩	59,550	(37,575)	21,975
(In millions of won)	Dof	ore tax	2017 Tax benefit	Net of tax
Net change in fair value of available-for-sale financial assets	W	ore tax	1 ax benefit	Net of tax
· ·	-\/	(16.260)	0.250	(7.001)
Remeasurements of net defined benefit liabilities (assets)	((16,260)	9,259	(7,001)
Foreign currency translation differences for foreign operations	((231,738)	_	(231,738)
Change in equity of equity method investee		1,346		1,346
	W (2	246,652)	9,259	(237,393)
(I; III				
(In millions of won)			2018	
	Bef	ore tax	Tax expense	Net of tax
Net change in fair value of available-for-sale financial assets	W			
Remeasurements of net defined benefit liabilities (assets)		5,690	(1,169)	4,521
Foreign currency translation differences for foreign operations		(19,987)		(19,987)
Change in equity of equity method investee		57		57
	W	(14,240)	(1,169)	(15,409)

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

23. Income Taxes, Continued

(c) Reconciliation of the actual effective tax rate for the years ended December 31, 2016, 2017, and 2018 is as follows:

(In millions of won)	2016		20	17	2018	
Profit (loss) before income						
taxes	₩	1,316,233		2,332,632		(91,366)
Income tax using the statutory						
tax rate of each country	33.49%	440,753	28.54%	665,733	(33.60%)	30,695
Non-deductible expenses	3.39%	44,606	2.72%	63,416	(40.07%)	36,608
Tax credits	(11.45%)	(150,663)	(10.64%)	(248,191)	117.27%	(107,146)
Change in unrecognized						
deferred tax assets	5.52%	72,678	(0.50%)	(11,708)	(70.94%)	64,818
Adjustment for prior years					(90.00%)	82,225
Effect on change in tax rate						
(Note 24(d))	_	_	(3.10%)	(72,376)	15.68%	(14,326)
Others	(1.72%)	(22,649)	(0.06%)	(1,294)	5.25%	(4,797)
Actual income tax expense	₩	384,725		395,580		88,077
Actual effective tax rate		29.23%		16.96%		(*)

(*) Actual effective tax rate are not calculated due to loss before income tax.

24. Deferred Tax Assets and Liabilities

(a) Unrecognized deferred tax liabilities

As of December 31, 2017 and 2018, in relation to the temporary differences on investments in subsidiaries amounting to \\ \Psi 103,946\ million and \\ \Psi 85,368\ million, the Controlling Company did not recognize deferred tax liabilities since the Controlling Company is able to control the timing of the reversal of the temporary difference and it is probable that the temporary differences will not reverse in the foreseeable future.

(b) Unused tax credit carryforwards for which no deferred tax asset is recognized

Realization of deferred tax assets related to tax credit carryforwards which are primarily related to Korea is dependent on whether sufficient taxable income will be generated prior to their expiration. As of December 31, 2018, the Controlling Company recognized deferred tax assets of \(\pi\)308,393 million, in relation to tax credit carryforwards, to the extent that management believes the realization is probable. The amount of unused tax credit carryforwards for which no deferred tax asset is recognized and their expiration dates are as follows:

	December 31, 2019	December 31, 2020	December 31, 2021	December 31, 2022
Tax credit				
carryforwards	W 29,770	_	58,391	91,862

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

24. <u>Deferred Tax Assets and Liabilities, Continued</u>

(c) Deferred tax assets and liabilities are attributable to the following:

(In millions of won)	Ass	Assets Liabilities Total			tal	
	December, 31, 2017	December, 31, 2018	December, 31, 2017	December, 31, 2018	December, 31, 2017	December, 31, 2018
Other accounts receivable, net	W —		(1,441)	(1,013)	(1,441)	(1,013)
Inventories, net	34,550	60,606			34,550	60,606
Defined benefit liabilities, net	2,375	_	_	_	2,375	_
Unrealized gain or loss and others	29,061	13,404	_	_	29,061	13,404
Accrued expenses	183,903	126,072	_	_	183,903	126,072
Property, plant and equipment	409,928	445,721	_	(1,495)	409,928	444,226
Intangible assets	3,457	3,468	(24,646)	(14,588)	(21,189)	(11,120)
Provisions	27,018	32,468			27,018	32,468
Gain or loss on foreign currency translation,						
net	13	13	_	_	13	13
Others	27,562	20,850	_	(7,665)	27,562	13,185
Tax loss carryforwards	_	134,845	_	` <u> </u>	_	134,845
Tax credit carryforwards	268,926	308,393			268,926	308,393
Deferred tax assets (liabilities)	₩ 986,793	1,145,840	(26,087)	(24,761)	960,706	1,121,079

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

24. Deferred Tax Assets and Liabilities, Continued

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

(In millions of won)

			Other compre- hensive			Other compre-	
	January 1, 2017	Profit or loss	income (loss)	December 31, 2017	Profit or loss	hensive income	December 31, 2018
Other accounts receivable, net	W (1,190)	(251)		(1,441)	428		(1,013)
Inventories, net	35,771	(1,221)		34,550	26,056		60,606
Defined benefit liabilities, net	10,817	(17,701)	9,259	2,375	(1,206)	(1,169)	
Subsidiaries and associates	34,777	(5,716)		29,061	(15,657)		13,404
Accrued expenses	122,998	60,905	_	183,903	(57,831)	_	126,072
Property, plant and equipment	338,860	71,068	_	409,928	34,298	_	444,226
Intangible assets	(31,027)	9,838	_	(21,189)	10,069	_	(11,120)
Provisions	15,051	11,967	_	27,018	5,450	_	32,468
Gain or loss on foreign currency translation,							
net	11	2	_	13	_	_	13
Others	21,435	6,127	_	27,562	(14,377)	_	13,185
Tax loss carryforwards			_		134,845	_	134,845
Tax credit carryforwards	287,400	(18,474)		268,926	39,467		308,393
Deferred tax assets (liabilities)	₩ 834,903	116,544	9,259	960,706	161,542	(1,169)	1,121,079

Statutory tax rate applicable to the Controlling Company is 24.2% for the year ended December 31, 2017. During the year ended December 31, 2017, certain amendments to corporate income tax rules in Korea were enacted and effective on January 1, 2018 that resulted in application of 27.5% for taxable income in excess of \(\mathbb{W}\)300,000 million. Deferred taxes as of December 31, 2017 and December 31, 2018 have been measured using the applicable tax rates from the amendment.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

25. Earnings (Loss) Per Share Attributable to Owners of the Controlling Company

a) Basic earnings (loss) per share for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In won and No. of shares)

	2016	2017	2018
Profit (loss) attributable to owners of the Controlling Company	₩ 906,714,278,688	1,802,756,119,275	(207,239,484,774)
Weighted-average number of common stocks outstanding	357,815,700	357,815,700	357,815,700
Earnings (loss) per share	₩ 2,534	5,038	(579)

For the years ended December 31, 2016, 2017 and 2018, there were no events or transactions that resulted in changes in the number of common stocks used for calculating earnings (loss) per share.

(b) Diluted earnings (loss) per share for the years ended December 31, 2016, 2017 and 2018 are not calculated since there was no potential common stock.

26. Financial Risk Management

The Group is exposed to credit risk, liquidity risk and market risks. The Group identifies and analyzes such risks, and controls are implemented under a risk management system to monitor and manage these risks at below a threshold level.

(a) Market Risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices, will affect the Group's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

(i) Currency Risk

The Group is exposed to currency risk on sales, purchases and borrowings that are denominated in a currency other than the functional currency of the Controlling Company, Korean won (KRW). The currencies in which these transactions primarily are denominated are USD, CNY, JPY, etc.

Interest on borrowings is denominated in the currency of the borrowing. Generally, borrowings are denominated in currencies that match the cash flows generated by the underlying operations of the Group, primarily KRW, USD and CNY.

In respect of other monetary assets and liabilities denominated in foreign currencies, the Group adopts policies to ensure that its net exposure is kept to an acceptable level by buying or selling foreign currencies at spot rates when necessary to address short-term imbalances. The Group entered into a currency swap contract to hedge currency risk with respect to foreign currency borrowings and bonds.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(i) Currency Risk, Continued

i) Exposure to currency risk

The Group's exposure to foreign currency risk based on notional amounts at the reporting date is as follows:

(In millions)		December 31, 2017					
	USD	JPY	CNY	TWD	EUR	PLN	VND
Cash and cash equivalents	1,228	152	6,940	16	3	165	342,063
Deposits in banks	_	_	750	_	_	_	
Trade accounts and notes receivable	3,316	11	1,453	_	_	_	
Non-trade receivable	62	1,340	136	2	9	_	13,405
Other assets denominated in foreign currencies	1	206	596	7	_	_	1,882
Trade accounts and notes payable	(1,345)	(14,898)	(2,843)		—		(102,398)
Other accounts payable	(285)	(14,653)	(2,403)	(11)	(8)	(4)	(2,138,370)
Borrowings	(1,500)		(3,263)				
Net exposure	1,477	(27,842)	1,366	14	4	161	(1,883,418)
							
(In millions)	December 31, 2018						
	USD	JPY	CNY	TWD	EUR	PLN	VND
Cash and cash equivalents	790	83	5,515	121	8	206	2,070,889

(In millions)	December 31, 2018						
	USD	JPY	CNY	TWD	EUR	PLN	VND
Cash and cash equivalents	790	83	5,515	121	8	206	2,070,889
Trade accounts and notes receivable	2,175	7	1,098				
Non-trade receivable	21	852	201	3	4	_	23,182
Other assets denominated in foreign currencies	33	220	11,157	108	12	23	2,782
Trade accounts and notes payable	(863)	(12,501)	(2,862)	_	_	_	(355,390)
Other accounts payable	(928)	(20,326)	(4,762)	(6)	(3)	(4)	(1,585,130)
Borrowings	(2,571)		(5,198)				
Aggregate notional amounts in financial position	(1,343)	(31,665)	5,149	226	21	225	156,333
Currency swap contracts	780	_	_	_		_	_
Net exposure	(563)	(31,665)	5,149	226	21	225	156,333

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(i) Currency Risk, Continued

i) Exposure to currency risk, Continued

Average exchange rates applied during the reporting periods are as follows:

(In won)	A	verage rate		Reporting date spot rate		
	2016	2017	2018	December 31, 2017	December 31, 2018	
USD	₩ 1,159.83	1,131.08	1,100.21	1,071.40	1,118.10	
JPY	10.67	10.09	9.96	9.49	10.13	
CNY	174.40	167.52	166.41	163.65	162.76	
TWD	35.97	37.16	36.51	35.92	36.58	
EUR	1,283.95	1,277.01	1,298.53	1,279.25	1,279.16	
PLN	294.41	299.98	304.87	306.07	297.33	
VND	0.0518	0.0498	0.0478	0.0472	0.0482	

ii) Sensitivity analysis

A weaker won, as indicated below, against the following currencies which comprise the Group's assets or liabilities denominated in a foreign currency as of December 31, 2017 and 2018, would have increased (decreased) equity and profit or loss by the amounts shown below. This analysis is based on foreign currency exchange rate variances that the Group considers to be reasonably possible as of the end of the reporting period. The analysis assumes that all other variables, in particular interest rates, would remain constant. The changes in equity and profit or loss would have been as follows:

December 3	1, 2017	December 31, 2018		
	Profit or		Profit or	
Equity	loss	Equity	loss	
W 50,040	91,238	(46,136)	38,725	
(10,294)	(9,141)	(12,060)	(10,497)	
13,212	(6,396)	41,779	318	
23	1	413	1	
16	594	1,197	390	
2,515	(120)	3,451	(236)	
(4,445)	_	273	273	
	Equity W 50,040 (10,294) 13,212 23 16 2,515	Equity loss W 50,040 91,238 (10,294) (9,141) 13,212 (6,396) 23 1 16 594 2,515 (120)	Equity Profit or loss Equity W 50,040 91,238 (46,136) (10,294) (9,141) (12,060) 13,212 (6,396) 41,779 23 1 413 16 594 1,197 2,515 (120) 3,451	

A stronger won against the above currencies as of December 31, 2017 and 2018 would have had the equal but opposite effect on the above currencies to the amounts shown above, on the basis that all other variables remain constant.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

- (ii) Interest Rate Risk
- i) Profile

The interest rate profile of the Group's interest-bearing financial instruments at the reporting date is as follows:

(In millions of won)

	December 31, 2017	December 31, 2018
Fixed rate instruments		
Financial assets	₩ 3,360,800	2,443,583
Financial liabilities	(2,962,671)	(5,033,515)
	₩ 398,129	(2,589,932)
Variable rate instruments		
Financial liabilities	₩ (2,640,447)	(3,525,262)

ii) Equity and profit or loss sensitivity analysis for variable rate instruments

For the years ended December 31, 2017 and 2018 a change of 100 basis points in interest rates at the reporting date would have increased (decreased) equity and profit or loss by the amounts shown below for the respective following years. This analysis assumes that all other variables, in particular foreign currency rates, remain constant.

(In millions of won)	Equi	ty	Profit or loss	
	1%p increase	1%p decrease	1%p increase	1%p decrease
December 31, 2017				
Variable rate instruments(*)	₩(17,362)	17,362	(17,362)	17,362
December 31, 2018				
Variable rate instruments(*)	$\Psi(25,558)$	25,558	(25,558)	25,558

(*) Financial instruments subject to interest rate swap not qualified for hedging are excluded.

(iii) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's receivables from customers.

The Group's exposure to credit risk of trade and other receivables is influenced mainly by the individual characteristics of each customer. However, management believes that the demographics of the Group's customer base, including the default risk of the country in which customers operate, do not have a significant influence on credit risk since the majority of the customers are global electronic appliance manufacturers operating in global markets.

The Group establishes credit limits for each customer and each new customer is analyzed quantitatively and qualitatively before determining whether to utilize third party guarantees, insurance or factoring as appropriate.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(iii) Credit risk, Continued

In relation to the impairment of financial assets, the Group recognizes expected credit loss and its changes at each reporting date subsequent to initial recognition of financial asset according to an expected credit loss impairment model.

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk as of December 31, 2017 and 2018 are as follows:

i) As of December 31, 2017

	December 31, 20	
Cash and cash equivalents	W	2,602,560
Deposits in banks		758,089
Trade accounts and notes receivable		4,325,120
Non-trade receivable		150,554
Accrued income		14,273
Available-for-sale financial assets		162
Financial assets at fair value through profit or loss		1,552
Deposits		30,378
Short-term loans		16,766
Long-term loans		32,408
Long-term non-trade receivable		8,738
Derivatives		842
	W	7,941,442

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

ii) As of December 31, 2018

(In millions of won)

	Dece	mber 31, 2018
Financial assets carried at amortized cost		
Cash and cash equivalents	\mathbf{W}	2,365,022
Deposits in banks		78,411
Trade accounts and notes receivable		2,829,163
Non-trade receivable		159,238
Accrued income		10,075
Deposits		91,123
Short-term loans		16,116
Long-term loans		55,048
Long-term non-trade receivable		11,448
	W	5,615,644
Financial assets at fair value through profit or loss		
Convertible bonds	₩	1,327
Derivatives		13,059
	W	14,386
Financial assets at fair value through other comprehensive		
income		
Debt instrument	W	161
	W	5,630,191

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises primarily from the sales and investing activities. Trade accounts and notes receivables are insured in order to manage credit risk and uninsured trade accounts and notes receivables are managed in accordance with the Group's management policy.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(c) Liquidity Risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group has historically been able to satisfy its cash requirements from cash flows from operations and debt and equity financing. To the extent that the Group does not generate sufficient cash flows from operations to meet its capital requirements, the Group may rely on other financing activities, such as external long-term borrowings and offerings of debt securities, equity-linked and other debt securities. In addition, the Group maintains a line of credit with various banks.

The following are the contractual maturities of financial liabilities, including estimated interest payments, as of December 31, 2018.

(In millions of won)				Contractual	cash flows		
	Carrying amount	Total	6 months or less	6-12 months	1-2 years	2-5 years	More than 5 years
Non-derivative financial liabilities							
Secured bank borrowings	₩ 268,093	268,190	268,190		_		_
Unsecured bank borrowings	5,958,427	6,588,502	565,832	356,688	973,297	4,169,682	523,003
Unsecured bond issues	2,332,257	2,537,553	291,738	328,400	456,990	1,320,248	140,177
Trade accounts and notes payable	3,087,461	3,087,461	3,087,461	_	_	_	_
Other accounts payable	3,566,629	3,566,629	3,565,599	1,030			_
Long-term other accounts payable	3,103	3,103	_	_	2,077	1,026	_
Security deposits	10,955	10,955	_	165	10,790		_
Derivative financial liabilities							
Derivatives	₩ 25,758	(35,140)	(6,742)	(6,728)	(12,517)	(9,153)	
	W 15,252,683	16,027,253	7,772,078	679,555	1,430,637	5,481,803	663,180

It is not expected that the cash flows included in the maturity analysis could occur significantly earlier, or at significantly different amounts.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(d) Capital Management

Management's policy is to maintain a capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business. Liabilities to equity ratio, net borrowings to equity ratio and other financial ratios are used by management to achieve an optimal capital structure. Management also monitors the return on capital as well as the level of dividends to ordinary shareholders.

	December 31, 2017	December 31, 2018
Total liabilities	₩ 14,178,177	18,289,464
Total equity	14,981,510	14,886,246
Cash and deposits in banks(*1)	3,360,638	2,443,422
Borrowings (including bonds)	5,603,118	8,558,777
Total liabilities to equity ratio	95%	123%
Net borrowings to equity ratio(*2)	15%	41%

- (*1) Cash and deposits in banks consist of cash and cash equivalents and current deposit in banks.
- (*2) Net borrowings to equity ratio is calculated by dividing total borrowings (including bonds) less cash and current deposits in banks by total equity.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(e) Determination of fair value

(i) Measurement of fair value

A number of the Group's accounting policies and disclosures require the determination of fair value, for both financial and non-financial assets and liabilities. Fair values have been determined for measurement and/or disclosure purposes based on the following methods. When applicable, further information about the assumptions made in determining fair values is disclosed in the notes specific to that asset or liability.

i) Current assets and liabilities

The carrying amounts approximate fair value because of the short maturity of these instruments.

ii) Trade receivables and other receivables

The fair value of trade and other receivables is estimated as the present value of future cash flows, discounted at the market rate of interest at the reporting date. This fair value is determined for disclosure purposes. The carrying amounts of short-term receivables approximate fair value.

iii) Investments in equity and debt securities

The fair value of marketable financial assets at fair value through profit or loss and at fair value through other comprehensive income is determined by reference to their quoted closing bid price at the reporting date. The fair value of non-marketable instruments is determined using valuation methods.

iv) Non-derivative financial liabilities

Fair value, which is determined for disclosure purposes, except for the liabilities at FVTPL, is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(e) Determination of fair value, Continued

(ii) Fair values versus carrying amounts

The fair values of financial assets and liabilities, together with the carrying amounts shown in the consolidated statements of financial position as of December 31, 2017 and 2018 are as follows:

i) As of December 31, 2017

(In millions of won)	December	31, 2017
	Carrying	Fair
	amounts	values
Assets carried at fair value		
Available-for-sale financial assets	₩ 162	162
Financial asset at fair value through profit or loss	1,552	1,552
Derivatives	842	842
Assets carried at amortized cost		
Cash and cash equivalents	₩2,602,560	(*)
Deposits in banks	758,089	(*)
Trade accounts and notes receivable	4,325,120	(*)
Non-trade receivable	150,554	(*)
Accrued income	14,273	(*)
Deposits	30,378	(*)
Short-term loans	16,766	(*)
Long-term loans	32,408	(*)
Long-term non-trade receivable	8,738	(*)
Liabilities carried at amortized cost		, ,
Secured bank borrowings	₩ 642,172	642,172
Unsecured bank borrowings	2,950,184	2,955,399
Unsecured bond issues	2,010,762	2,016,086
Trade accounts and notes payable	2,875,090	(*)
Other accounts payable	3,169,937	3,170,147
Long-term other accounts payable	2	(*)
		, ,

^(*) Excluded from disclosures as the carrying amount approximates fair value.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(e) Determination of fair value, Continued

ii) As of December 31, 2018

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^(*) Excluded from disclosures as the carrying amount approximates fair value.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

- (e) Determination of fair value, Continued
 - (iii) Fair values of financial assets and liabilities
 - i) Fair value hierarchy

The table below analyzes financial instruments carried at fair value based on the input variables used in the valuation method to measure fair value of assets and liabilities. The different levels have been defined as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly
- Level 3: inputs for the asset or liability that are not based on observable market data
- ii) Financial instruments measured at fair value

Fair value hierarchy classifications of the financial instruments that are measured at fair value as of December 31, 2017 and 2018 are as follows:

Level 1

Level 2

Level 3

Total

December 31, 2017				
Available-for-sale financial assets	₩ 162			162
Financial assets at fair value through profit or loss	_	_	1,552	1,552
Derivatives	_	_	842	842
(In millions of won)				
	Level 1	Level 2	Level 3	Total
December 31, 2018				
Financial assets at fair value through profit or loss				
Equity instrument	₩	_	13,681	13,681
Convertible bonds			1,327	1,327
Derivatives	_	_	13,059	13,059
Financial asset at fair value through other comprehensive income				
Debt instrument	₩161	_	_	161
Financial liabilities at fair value through profit or loss				
Derivatives	₩—	_	25,758	25,758

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

26. Financial Risk Management, Continued

(In millions of won)

(e) Determination of fair value, Continued

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

Fair value hierarchy classifications, valuation technique and inputs for fair value measurements of the financial instruments not measured at fair value but for which the fair value is disclosed as of December 31, 2017 and December 31, 2018 are as follows:

December 31, 2017

Classification	Level 1 Level 2 Level 3		Valuation technique	Input	
Liabilities					
Secured bank borrowings	₩ —		642,172	Discounted cash flow	Discount rate
Unsecured bank borrowings	_	_	2,955,399	Discounted cash flow	Discount rate
Unsecured bond issues	_		2,016,086	Discounted cash flow	Discount rate
Other accounts payable	_	_	3,170,147	Discounted cash flow	Discount rate
(In millions of won)	D	ecember 31	, 2018		
(In millions of won) Classification	D Level 1	ecember 31 Level 2	, 2018 Level 3	Valuation technique	Input
			,	Valuation technique	Input
Classification			,	Valuation technique Discounted cash flow	Input Discount rate
Classification Liabilities	Level 1		Level 3		
Classification Liabilities Secured bank borrowings	Level 1	Level 2	Level 3 268,093	Discounted cash flow	Discount rate

The interest rates applied for determination of the above fair value at the reporting date are as follows:

	December 31, 2017	December 31, 2018
Borrowings, bonds and others	1.57~2.92%	2.09~3.37%

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

27. Changes in liabilities arising from financing activities

Changesin liabilities arising from financing activities for the year ended December 31, 2018 are as follows:

			Nor	n-cash transact	tions	
	January 1, 2018	Cash flows from financing activities	Reclassification	Exchange rate effect	Effective interest adjustment	December 31, 2018
Short-term borrowings	₩ —	(720)		720		
Current portion of long-term						
borrowings and bonds	1,452,926	(1,859,098)	1,904,888	54,659	532	1,553,907
Long-term borrowings	2,644,189	3,882,958	(1,345,520)	50,644	_	5,232,271
Bonds	1,506,003	828,169	(559,368)	(4,172)	1,967	1,772,599
	₩ 5,603,118	2,851,309	_	101,851	2,499	8,558,777

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

28. Related Parties and Others

(a) Related parties

Related parties for the periods presented are as follows:

Classification	Description
Associates(*)	Paju Electric Glass Co., Ltd. and others
Entity that has significant influence over the Controlling Company	LG Electronics Inc.
Subsidiaries of the entity that has significant influence over the	Subsidiaries of LG Electronics Inc.
Controlling Company	

(*) Details of associates are described in note 8.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

28. Related Parties and Others, Continued

(b) Significant transactions such as sales of goods and purchases of raw material and outsourcing service and others, which occurred in the normal course of business with related parties for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of won)	2016						
	Purchase and others						
	Sales and others	Dividend income	Purchase of raw material and others	Acquisition of property, plant and equipment	Outsourcing fees	Other costs	
Joint Venture							
Suzhou Raken Technology Co., Ltd.(*1)	₩ 59,388	29,902			_	543	
Associates and their subsidiaries							
New Optics Ltd.	₩ 2,469	_	50,372		7,569	255	
New Optics USA, Inc.	_	_	_	_	509	_	
NEWOPTIX RS. SA DE CV	33						
INVENIA Co., Ltd.	54	_	1,429	48,398	_	261	
TLI Inc.(*2)		101	57,429		_	2,238	
AVACO Co., Ltd.(*2)	_	128	703	31,299		1,373	
AVATEC Co., Ltd.		265			70,196	1,027	
Paju Electric Glass Co., Ltd.	_	21,030	453,463	_	_	3,674	
Shinbo Electric Co., Ltd.	204,637		355,607		2,449	1,097	
Narenanotech Corporation	17	_	513	24,821	_	909	
WooRee E&L Co., Ltd.						32	
YAS Co., Ltd.	44	_	2,076	80,836	_	1,758	
LB Gemini New Growth Fund No. 16		8,394					
	W 207,254	29,918	921,592	185,354	80,723	12,624	

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	2016						
			Purchase and others				
	Sales and others	Dividend income	Purchase of raw material and others	Acquisition of property, plant and equipment	Outsourcing fees	Other costs	
Entity that has significant influence over the							
Controlling Company							
LG Electronics Inc.	₩1,580,279		23,047	538,175		103,158	
Subsidiaries of the entity that has significant							
influence over the Controlling Company							
LG Electronics India Pvt. Ltd.	₩ 75,591					69	
LG Electronics Vietnam Haiphong Co., Ltd.	162,893	_	_	_	_	141	
LG Electronics Nanjing New Technology							
Co., Ltd.	229,773			293		1,876	
LG Electronics RUS, LLC	127,316	_	_	_	_	2,993	
LG Electronics do Brasil Ltda.	133,903		_	_	_	3,430	
LG Innotek Co., Ltd.	11,503	_	209,878	_	_	9,873	
Qingdao LG Inspur Digital Communication							
Co., Ltd.	47,804		_	_	_		
Inspur LG Digital Mobile Communications							
Co., Ltd.	370,966	_	_	_	_	5	
LG Electronics Mexicalli, S.A. DE C.V.	210,021		_	_	_	77	
LG Electronics Mlawa Sp. z o.o.	709,558	_	_	_	<u> </u>	895	
LG Electronics Taiwan Taipei Co., Ltd.	11,919					27	

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	2016					
•	Purchase and others					
	Sales and others	Dividend income	Purchase of raw material and others	Acquisition of property, plant and equipment	Outsourcing fees	Other costs
LG Electronics Wroclaw Sp. z o.o.	W 290,785		_	_	_	99
LG Hitachi Water Solutions Co., Ltd.	_	_		167,987		2,782
LG Electronics Reynosa, S.A. DE C.V.	1,074,790	_	_	_	_	1,907
LG Electronics Almaty Kazakhstan	15,953	_				33
LG Electronics Air-Conditioning (Shandong)				4.004		250
Co., Ltd.	_	_	_	4,994	_	259
Hi Entech Co., Ltd.	_			_		25,365
Hientech (Tianjin) Co., Ltd.	_	_		28,587	—	10,613
LG Electronics S.A. (Pty) Ltd	21,236	_				39
Others	2,289			<u> </u>		4,094
	₩ 3,496,300		209,878	201,861		64,577
	₩ 5,343,221	59,820	1,154,517	925,390	80,723	180,902

^(*1) Represents transactions occurred prior to exchange of equity interests.

^(*2) Represent transactions occurred prior to disposal of the entire investments.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	2017						
					Purchase an	d others	
	an	Sales d others	Dividend income	Purchase of raw material and others	Acquisition of property, plant and equipment	Outsourcing fees	Other costs
Associates and their subsidiaries						·	
New Optics Ltd.(*)	W	1	_			4	6
INVENIA Co., Ltd.		_	_	1,862	66,548	_	2,259
AVATEC Co., Ltd.		_	530			90,785	720
Paju Electric Glass Co., Ltd.		_	8,109	380,815	_	_	4,225
Shinbo Electric Co., Ltd.(*)		15,812					21
Narenanotech Corporation(*)		_	_	279	21,727	_	244
WooRee E&L Co., Ltd.			_				175
YAS Co., Ltd.				6,347	69,243		2,474
	W	15,813	8,639	389,303	157,518	90,789	10,124
Entity that has significant influence over the							
Controlling Company							
LG Electronics Inc.	₩1	,689,381		47,898	906,427		109,865
Subsidiaries of the entity that has significant							
influence over the Controlling Company							
LG Electronics India Pvt. Ltd.	₩	71,597	_	_	_		163
LG Electronics Vietnam Haiphong Co., Ltd.		205,934	_	_	8,892	_	198

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	2017						
					Purchase and	d others	
	aı	Sales id others	Dividend income	Purchase of raw material and others	Acquisition of property, plant and equipment	Outsourcing fees	Other costs
LG Electronics Nanjing New Technology Co.,		,					
Ltd.	W	300,785	_	_	245	_	379
LG Electronics RUS, LLC		103,479	_		_		963
LG Electronics do Brasil Ltda.		228,821	_	_	_		430
LG Innotek Co., Ltd.		14,836		199,896			5,692
Qingdao LG Inspur Digital Communication Co., Ltd.		77,787	_	_	_	_	_
Inspur LG Digital Mobile Communications Co.,							
Ltd.		230,832	_				_
LG Electronics Mexicalli, S.A. DE C.V.		319,772	_	_	_		186
LG Electronics Mlawa Sp. z o.o.		847,565					985
LG Electronics Taiwan Taipei Co., Ltd.		13,693	_	_	_		164
LG Hitachi Water Solutions Co., Ltd.			_	_	318,978		1,532
LG Electronics Reynosa, S.A. DE C.V.		1,287,340	_	_	_		1,926
LG Electronics Almaty Kazakhstan		14,079					53
LG Electronics Air-Conditioning (Shandong)							
Co., Ltd.		_	_	255	3,744		2,621
HiEntech Co., Ltd.					6,991		34,432
Hientech (Tianjin) Co., Ltd.		_	_	_	21,838		11,822
LG Electronics S.A. (Pty) Ltd.		14,155					25
Others		857		3	14		7,264
	W	3,731,532		200,154	360,702		68,835
	₩	5,436,726	8,639	637,355	1,424,647	90,789	188,824

^(*) Represents transactions occurred prior to disposal of the entire investments.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	2018						
		Purchase and others					
		Sales d others	Dividend income	Purchase of raw material and others	Acquisition of property, plant and equipment	Outsourcing fees	Other costs
Associates and their subsidiaries							
INVENIA Co., Ltd.		_	30	1,608	58,111	_	896
AVATEC Co., Ltd.		_	530	_	_	71,403	905
Paju Electric Glass Co., Ltd.		_	4,172	364,183	_	_	4,411
WooRee E&L Co., Ltd.		_	_	58	_	_	144
YAS Co., Ltd.		_	_	5,281	143,192	_	3,391
LB Gemini New Growth Fund No. 16		1,112	540		_	—	—
	W	1,112	5,272	371,130	201,303	71,403	9,747
Entity that has significant influence over the							
Controlling Company							
LG Electronics Inc.	₩1	,215,153	_	36,522	1,041,563	_	127,775
Subsidiaries of the entity that has significant							
influence over the Controlling Company							
LG Electronics India Pvt. Ltd.	W	71,798					103
LG Electronics Vietnam Haiphong Co., Ltd.		173,051	_		4,541	—	166

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

(In millions of won)	2018					
	Purchase and others					
	Sales and others	Dividend income	Purchase of raw material and others	Acquisition of property, plant and equipment	Outsourcing fees	Other costs
LG Electronics Nanjing New Technology Co.,						
Ltd.	₩ 223,524	_	_	424	_	1,528
LG Electronics RUS, LLC	106,631	_		_		2,673
LG Electronics do Brasil Ltda.	192,775	_		_	—	350
LG Innotek Co., Ltd.	29,267	_	147,453	_	_	39,136
Qingdao LG Inspur Digital Communication Co., Ltd.	37,738	_	_	_	_	_
Inspur LG Digital Mobile Communications Co., Ltd.	131,970	_				1
LG Electronics Mexicalli, S.A. DE C.V.	187,844	_	_	_	_	210
LG Electronics Mlawa Sp. z o.o.	740,784	_		_	_	631
LG Electronics Taiwan Taipei Co., Ltd.	12,746	_		_	_	330
LG Hitachi Water Solutions Co., Ltd.	9,100	_		304,365	_	8,980
LG Electronics Reynosa, S.A. DE C.V.	1,030,414	_	_	_	_	2,021
LG Electronics Almaty Kazakhstan	3,759					42
LG Electronics Air-Conditioning (Shandong)						
Co., Ltd.	_	_	330	26,871	_	7,264
HiEntech Co., Ltd.	_	_		22,378	_	29,215
Hientech (Tianjin) Co., Ltd.	_	_		92,900	_	23,880
LG Electronics S.A. (Pty) Ltd.	7,244					20
LG Electronics Egypt S.A.E.	25,491	_	_	-	_	16
Others	5,195		28	15		11,480
	W 2,989,331		147,811	451,494		128,046
	W4,205,596	5,272	555,463	1,694,360	71,403	265,568

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

28. Related Parties and Others, Continued

(c) Trade accounts and notes receivable and payable as of December 31, 2017 and 2018 are as follows:

(In millions of won)					
	Trade accounts and notes receivable and others			Trade accounts and notes payable and others	
	Decer	nber 31, 2017	December 31, 2018	December 31, 2017	December 31, 2018
Associates					
INVENIA Co., Ltd.		2,375	2,000	18,662	30,179
AVATEC Co., Ltd.		_	_	2,949	4,382
Paju Electric Glass Co., Ltd.			_	60,141	60,566
WooRee E&L Co., Ltd.		_	_	61	7
YAS Co., Ltd.		375		6,474	6,145
	W	2,750	2,000	88,287	101,279
Entity that has significant influence over					
the Controlling Company					
LG Electronics Inc.	W	550,335	247,679	257,071	430,677
Subsidiaries of the entity that has					
significant influence over the					
Controlling Company					
LG Electronics do Brasil Ltda.	₩	19,091	15,608	10	62
LG Electronics RUS, LLC		25,102	22,570	80	90
LG Innotek Co., Ltd.		407	2,885	62,675	47,382
Qingdao LG Inspur Digital					
Communication Co., Ltd.		13,061	3,530		
Inspur LG Digital Mobile					
Communications Co., Ltd.		55,278	13,172	<u> </u>	_

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

28. Related Parties and Others, Continued

	Trade accounts and notes receivable and others			Trade accounts a and o	nd notes payable thers
	Dece	mber 31, 2017	December 31, 2018	December 31, 2017	December 31, 2018
LG Electronics Mexicali, S.A. DE C.V.	W	29,440	15,305		
LG Electronics Mlawa Sp. z o.o.		136,874	70,236	25	33
LG Electronics Nanjing New Technology					
Co., Ltd.		46,373	43,463	699	139
LG Electronics Reynosa, S.A. DE C.V.		137,413	69,189	82	134
LG Electronics Vietnam Haiphong Co.,					
Ltd.		36,017	25,544	3,917	_
LG Hitachi Water Solutions Co., Ltd.		_	9,100	154,864	50,425
Hientech (Tianjin) Co., Ltd.		_	_	5,600	16,345
HiEntech Co., Ltd.		_	_	6,679	16,816
LG Electronics India Pvt. Ltd.		3,030	9,047	_	29
LG Electronics Egypt S.A.E.			10,296	1	
LG Electronics Air-Conditioning					
(Shandong) Co., Ltd.		_	_	_	17,654
Others		7,618	5,263	1,714	1,246
	W	509,704	315,208	236,346	150,355
	W	1,062,789	564,887	581,704	682,311

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

28. Related Parties and Others, Continued

(d) Details of significant cash transactions such as loans and collection of loans, which occurred in the normal course of business with related parties for the years ended December 31, 2017 and 2018 are as follows:

(In millions of won)

(Loans(*1)					
Associates	January 1, 2017	Increase	Decrease	December 31, 2017			
New Optics Ltd.(*2)	W 1,000		125	875			
INVENIA Co., Ltd.	833	2,000	458	2,375			
Narenanotech Corporation(*2)	300	_	75	225			
YAS Co., Ltd.	833		458	375			
	W 2,966	2,000	1,116	3,850			

- (*1) Loans are presented based on nominal amounts.
- (*2) Excluded from related parties due to disposal of equity investments during the year ended December 31, 2017.

(In millions of won)

(in millions of worl)		Loans(*)				
Associates	January 1, 2018	Increase	Decrease	December 31, 2018		
INVENIA Co., Ltd.	W 2,375		375	2,000		
YAS Co., Ltd.	375		375			
	₩ 2,750		750	2,000		

(*) Loans are presented based on nominal amounts.

Notes to the Consolidated Financial Statements For the years ended December 31, 2016, 2017 and 2018

28. Related Parties and Others, Continued

(e) Key management personnel compensation

Compensation costs of key management for the years ended December 31, 2016, 2017 and 2018 are as follows:

(In millions of won)

	2016	2017	2018
Short-term benefits	W 2,323	3,724	2,622
Expenses related to the defined benefit plan	897	488	794
	W 3,220	4,212	3,416

Key management refers to the registered directors who have significant control and responsibilities over the Controlling Company's operations and business.

29. Supplemental Cash Flow Information

Supplemental cash flow information for the years ended December 31, 2016, 2017 and 2018 is as follows:

(In millions of won)

	2016	2017	2018
Non-cash investing and financing activities:			
Changes in other accounts payable arising from the purchase of			
property, plant and equipment	W 809,406	632,355	516,734

30. Non-current Assets Held for Sale

The Group plans to dispose a part of tangible assets of LG Display Poland Sp. z o.o. based on the management's approval and began effort to sell the disposal group. The Group expects to complete the sale within the first half of 2019.

(1) impairment loss of disposal group

Fair value less costs to sell of disposal group is expected to exceed the carrying amount and no impairment loss is recognized to the non-current assets held for sale.

(2) assets of disposal group

Non-current assets as held for sale at the reporting date is as follows:

	December 31	, 2018
Property, plant and equipment	$\overline{\mathbf{W}}$ 70	0,161

ARTICLES OF INCORPORATION

OF

LG DISPLAY CO., LTD.

Amended on August 11, 2000 Amended on March 21, 2001 Amended on March 19, 2004 Amended on May 4, 2004 Amended on June 23, 2004 Amended on March 23, 2005 Amended on February 28, 2007 Amended on February 29, 2008 Amended on March 13, 2009 Amended on March 12, 2010 Amended on March 11, 2011 Amended on March 8, 2013 Amended on March 15, 2019

CHAPTER I. GENERAL PROVISIONS

Article 1. (Trade Name)

The name of the company shall be "EL-GI DISPLAY CHUSIK HOESA" (hereinafter referred to as the "Company"), which shall be written in English as "LG Display Co., Ltd."

Article 2. (Objectives)

The objectives of the Company shall be as follows:

(1) research, development, manufacturing, sales and marketing of displays and other related products utilizing the technologies, including, without limitation, thin-film transistor liquid crystal display ("TFT-LCD"), low-temperature poly-silicon liquid crystal display ("LTPS-LCD") and organic light emitting display ("OLED") technologies;

- (2) research, development, manufacturing, sales and marketing of products utilizing solar energy;
- (3) research, development, manufacturing, sales and marketing of certain components and equipments required for the development and manufacturing of the products and technologies described in the foregoing Paragraphs;
- (4) real estate transaction and lease business; and
- (5) any business and/or investment ancillary or incidental to the foregoing business.

Article 3. (Location)

The Company shall have its principal office in Seoul, Korea, and may establish branch offices, sub-branch offices, and other offices and factories at places necessary by a resolution of the Board of Directors.

Article 4. (Duration of Company)

The Company will continuously exist unless it is dissolved by a resolution of a General Meeting of Shareholders.

Article 5. (Method of Public Notice)

Public notice by the Company shall be given on the Company's website (http://www.lgdisplay.com). However, if public notice cannot be given on the Company's website due to technical difficulties or other unavoidable circumstances, it shall be published in "Maeil Business Newspaper" and "The Chosun Ilbo", both daily newspapers of general circulation published in Seoul.

CHAPTER II. SHARES

Article 6. (Total Number of Authorized Shares)

The total number of shares authorized to be issued by the Company shall be 500,000,000 shares.

Article 7. (Face Value)

The face value per share to be issued by the Company is 5,000 Won.

Article 8. (Electronic Registration of Shares and Rights that would otherwise be Indicated on Certificates of Preemptive Rights)

In lieu of issuing share certificates or certificates of preemptive rights, the Company shall electronically register the shares and rights that would otherwise be indicated on certificates of preemptive rights on an electronic registry of an electronic registration institution.

Article 9. (Classes of Shares)

All shares to be issued by the Company shall be common shares in non-bearer form and preferred shares in non-bearer form.

Article 9-2. (Number and Characteristics of Preferred Shares)

- (1) Preferred shares to be issued by the Company shall be non-voting and the number thereof shall be 40,000,000.
- (2) The dividend on a preferred share shall be not less than one percent (1%) per annum but not more than ten percent (10%) per annum of the par value of the share as determined by the Board of Directors at the time of issuance.
- (3) In case the dividend ratio of the common shares exceeds that of the preferred shares, the additional dividend on preferred shares shall be declared by participating in distribution of dividend at same ratio of dividend on common shares with respect to such excess, at the time of distribution of dividend on common shares.
- (4) If dividends on preferred shares for a fiscal year are not paid as prescribed above, such unpaid and accumulated amount shall be preferentially paid to the holders of preferred shares at the time of distribution of dividends for the following fiscal year.

- (5) Preferred shares may be issued, by a resolution of the Board of Directors at the time of issuance, as convertible to common shares ("convertible preferred shares"). The conversion price shall be determined by the Board of Directors at the time of issuance, and shall not be lower than the par value of the shares nor higher than the issue price of the convertible preferred shares. If a conversion period or a duration of the convertible preferred shares (upon expiration of which convertible preferred shares are automatically converted) is to be set, such period or duration shall be determined by the Board of Directors at the time of issuance, and shall end within one (1) to ten (10) years from the issuance of the convertible preferred shares. With respect to the dividends on the shares issued upon conversion of the convertible preferred shares, the provisions of Article 11 and Article 43-2, Paragraph (4) shall apply *mutatis mutandis*.
- (6) Preferred shares may be issued, by a resolution of the Board of Directors at the time of issuance, as redeemable within certain period of time with earnings ("redeemable preferred shares"). The redemption period shall be determined by the Board of Directors at the time of issuance and shall end within one (1) to ten (10) years from the issuance of the redeemable preferred shares. The Board of Directors shall determine the redemption price and the method of redemption, the source of which shall be earnings.
- (7) Preferred shares may be issued, by a resolution of the Board of Directors at the time of issuance, with any or all of the features set forth above in Paragraphs (5) and (6).
- (8) If the resolution not to pay the prescribed dividends on preferred shares is adopted at a General Meeting of Shareholders, the preferred shares shall have voting rights, starting with the first General Meeting of Shareholders following the General Meeting of Shareholders at which the resolution not to pay dividends on preferred shares was adopted, until the end of a General Meeting of Shareholders at which a resolution to pay dividends for such preferred shares is adopted.
- (9) In case the Company issues new shares by rights issue or bonus issue, then the new shares issued with respect to the preferred shares shall be common shares in the case of rights issues and shall be the shares of the same class in the case of bonus issues.

Article 10. (Preemptive Rights)

(1) The Company may issue additional shares with the resolution of the Board of Directors setting forth the detailed terms of the issue within the authorized share capital.

- (2) The Company's shareholders shall have preemptive rights to subscribe to new shares in proportion to their respective shareholding ratios; provided that the names and addresses of such shareholders shall be registered in the Register of Shareholders as of the date designated by the Company in the public notice made two (2) weeks prior thereto.
- (3) Notwithstanding Paragraph (2) above, the Company may allocate new shares to persons other than existing shareholders of the Company by a resolution of the Board of Directors in any of the following cases, provided that the aggregate number of shares issued pursuant to items 1 through 7 below shall not exceed 20% of the total number of issued and outstanding shares:
 - 1. Where the Company invites or cause underwriters to invite subscriptions for new shares;
 - 2. Where the Company issues new shares through a method of general public offering under Article 165-6 of the Financial Investment Services and Capital Market Act (the "Capital Market Act");
 - 3. Where the Company allocates new shares to any member of its Employee Stockownership Association pursuant to Article 165-7 of the Capital Market Act or pursuant to the Employee Welfare Basic Act;
 - 4. Where the Company issues new shares by exercise of stock options under Article 340-2 of the Commercial Code;
 - 5. Where the Company issues new shares for the issuance of a depositary receipt (DR) under Article 165-16 of the Capital Market Act;
 - 6. Where the Company issues new shares to corporations, institutional investors or domestic or overseas financial institutions, etc. for the achievement of the company's operational objectives, such as improvement of financial structure, etc.; or
 - 7. Where the Company issues new shares for the purpose of drawing foreign investment, when it deems necessary for its management; or
 - 8. Where the Company issues new shares through a public offering or cause underwriters to underwrite the new shares and/or DR for the purpose of initial listing on the Korea Exchange and/or the New York Stock Exchange.
- (4) If shares are not subscribed for as the result of a shareholder waiving or losing his/her pre-emptive right, or if fractional shares result from the allocation of new shares, such shares shall be disposed of in accordance with a resolution of the Board of Directors.
- (5) The recipient of the new shares shall become a shareholder of the Company the succeeding day of the payment date.

Article 10-2 (Stock Options)

- (1) The Company may grant stock options to its officers and employees (including the officers and employees of its affiliated company as defined in Article 542-3, Paragraph (1) of the Commercial Code; the same shall apply hereinafter) by a special resolution of the General Meeting of Shareholders pursuant to Article 340-2 of the Commercial Code, to the extent of not more than 15% of the total number of issued and outstanding shares; provided, however, that the Company may grant stock options to its officers and employees by a resolution of the Board of Directors to the extent of not more than 1% of the total number of issued and outstanding shares in accordance with the relevant laws and regulations. In this case, the shareholders or the Board of Directors may resolve to grant performance-linked stock options, linked with the Company's performance or market index.
- (2) The officers and employees, who have contributed, or have the capacity to contribute, to the establishment, management, overseas sales or technical improvement of the Company, may be granted stock options; provided, however, that those who are prohibited from being granted stock options under the applicable law and regulation may not be granted stock options.
- (3) The shares to be issued by the Company to its officers or employees by the exercise of their stock options (which shall refer to the shares being the basis for calculation in case the Company pays the difference, either in cash or shares, between the exercise price of stock options and the market price) shall be common shares in non-bearer form.
- (4) The terms and conditions, including features, exercise price, etc., of stock options shall be determined by a special resolution of the General Meeting of Shareholders or a resolution of the Board of Directors, pursuant to the applicable law and these Articles of Incorporation. The matters that are not set out to be decided by a resolution of the General Meeting of Shareholders or the Board of Directors under the applicable law or these Articles of Incorporation may be determined by the Board of Directors or a committee designated by the Board of Directors.
- (5) Stock options may be exercised after at least 3 years, but not more than the number of years set by the relevant resolution of the General Meeting of Shareholders or the Board of Directors within 7 years, have elapsed from the date of the relevant resolution of the General Meeting of Shareholders or the Board of Directors. Any person with a stock option may exercise such stock option only if he/she has served the Company for at least two (2) years from the date of the relevant resolution of the General Meeting of Shareholders or the Board of Directors, unless otherwise specified in the relevant law.

- (6) With respect to distribution of dividends for shares issued upon the exercise of stock options, Article 11 and Article 43-2, Paragraph (4) shall apply *mutatis mutandis*.
- (7) The Company may cancel the grant of stock options by a resolution of the Board of Directors in any of the following cases:
 - 1. Where an officer/employee of the Company voluntarily retires or resigns from his/her office after being granted stock options;
 - 2. Where an officer/employee of the Company incurs substantial damages to the Company due to his/her willful misconduct or negligence;
 - 3. Where the Company cannot respond to the exercise of an officer/employee's stock options due to the Company's liquidation or dissolution; or
 - 4. Where any cause for cancellation set forth in the stock option agreement occurs.

Article 11. (Record Date for Dividends on New Shares)

In case the Company issues new shares through rights issues, bonus issues or stock dividends, the new shares shall be deemed to have been issued at the end of the fiscal year immediately prior to the fiscal year during which the new shares are issued for purposes of distribution of annual dividends for such new shares.

Article 12. (Suspension of Alteration of Register of Shareholders and Record Date)

- (1) The Company shall suspend entry of any alterations into its register of shareholders with respect to shareholders' rights from January 1 to January 15 of each year.
- (2) The Company shall allow the shareholders who are registered in its register of shareholders as of December 31 of each year, to exercise their rights at an ordinary General Meeting of Shareholders held concerning the relevant fiscal year.

(3) When convening an extraordinary General Meeting of Shareholders or in any other necessary cases, in order to determine the person who shall exercise the right as shareholder, the Company may suspend entry of any alteration in the register of shareholders for a period not exceeding three (3) months as determined by a resolution of the Board of Directors or it may deem any shareholder whose name appears in the register of shareholders on a specified date, as determined by a resolution of the Board of Directors, to be the shareholder who shall be entitled to exercise such rights. The Company should give public notice thereof two weeks in advance.

Article 13. (Transfer Agent)

- (1) The Company shall retain a transfer agent for shares.
- (2) The transfer agent, the location where its services are rendered and the scope of a transfer agent's duties shall be determined by a resolution of the Board of Directors of the Company and shall be publicly notified.
- (3) The Company shall keep the shareholders registry, or a duplicate thereof, at a location where a transfer agent renders its services. In addition, the Company shall cause the transfer agent to handle activities such as the electronic registration of shares, management of the shareholders registry and other related businesses.
- (4) Those activities of a transfer agent set forth in Paragraph (3) above shall be performed in accordance with the Regulations for Securities Agency Business of the Transfer Agent.

Article 14. [Deleted]

Article 15. [Deleted]

CHAPTER II-2. BONDS

Article 15-2. (Issuance of Convertible Bonds)

- (1) The Company may issue convertible bonds to persons other than its shareholders by a resolution of the Board of Directors in any of the following cases, to the extent that the aggregate par value amount of the convertible bonds (plus any previously issued and outstanding convertible bonds and bonds with warrants) does not exceed two trillion five hundred billion Won (2.5 trillion Won):
 - 1. Where the Company issues convertible bonds through a general public offering;
 - 2. Where the Company issues convertible bonds for the purpose of drawing foreign investment, when it deems necessary for its management;
 - 3. Where the Company issues convertible bonds to a domestic or overseas financial institution for an urgent need for funds; or
 - 4. Where the Company issues convertible bonds in foreign countries in accordance with Article 165-16 of the Capital Market Act.
- (2) The convertible bonds referred to in Paragraph (1) above may be issued by the Board of Directors with partial conversion rights under which the right of the bondholders to demand conversion may be limited to a certain percentage of the total amount of convertible bonds.
- (3) The classes of shares to be issued upon conversion shall be common shares. The conversion price shall not be lower than the par value of the Company's shares as determined by the Board of Directors at the time of issuance of the relevant convertible bonds.
- (4) The period during which conversion may be requested shall be from the date one (1) month after the date of issuance of the relevant convertible bonds to the date one day prior to the redemption date of the bonds; provided, that the Board of Directors may, by its resolution, adjust the exercise period for convertible bonds within the above period.
- (5) With respect to the dividends on the shares to be issued upon conversion, Article 11 and Article 43-2, Paragraph (4) shall apply *mutatis mutandis*.

Article 15-3. (Issuance of Bonds with Warrants)

(1) The Company may issue bonds with warrant to persons other than its shareholders by a resolution of the Board of Directors in any of the following cases, to the extent that the aggregate par value amount of the bonds with warrant (plus any previously issued and outstanding convertible bonds and bonds with warrants) does not exceed two trillion five hundred billion Won (2.5 trillion Won):

- 1. Where the Company issues bonds with warrant through a general public offering;
- 2. Where the Company issues bonds with warrant for the purpose of drawing foreign investment, when it deems necessary for its management;
- 3. Where the Company issues bonds with warrant to a domestic or overseas financial institution for an urgent need for funds; or
- 4. Where the Company issues bonds with warrant in foreign countries in accordance with Article 165-16 of the Capital Market Act.
- (2) The aggregate price of new shares which may be subscribed for by the holders of warrants shall be determined by the Board of Directors, but shall not exceed the aggregate par value of the bonds with warrants.
- (3) The classes of shares to be issued upon exercise of warrant shall be common shares. The exercise price shall not be lower than the par value of the Company's shares as determined by the Board of Directors at the time of issuance of the relevant bonds with warrant.
- (4) The period during which warrant may be exercised shall be from the date one (1) month after the date of issuance of the relevant bonds with warrant to the date one day prior to the redemption date of the bonds; provided, that the Board of Directors may, by its resolution, adjust the exercise period for bonds with warrant within the above period.
- (5) With respect to the dividends on the shares to be issued upon exercise of warrant, Article 11 and Article 43-2, Paragraph (4) shall apply *mutatis mutandis*.

Article 15-4. (Electronic Registration of Bonds and Warrant Rights that would otherwise be Indicated on Certificates)

In lieu of issuing bond or warrant certificates, the Company shall electronically register the bonds and warrant rights that would otherwise be indicated on certificates on an electronic registry of an electronic registration institution.

Article 15-5. (Provisions Applicable to Bond Issuance)

Article 13 shall apply *mutatis mutandis* to issuance of bonds.

CHAPTER III. GENERAL MEETINGS OF SHAREHOLDERS

Article 16. (Time for convening of General Meetings of Shareholders)

- (1) General Meetings of the Shareholders of the Company shall be of two kinds: ordinary and extraordinary.
- (2) Ordinary General Meetings of Shareholders shall be held within three (3) months after the end of each fiscal year and Extraordinary General Meetings of Shareholders may be convened whenever deemed necessary.

Article 17. (Convening of General Meetings of Shareholders)

- (1) Unless otherwise provided for in the relevant laws and regulations, a General Meeting of Shareholders shall be convened by the Company's Representative Director pursuant to a resolution of the Board of Directors. On the occurrence of a vacancy or absence of the Representative Director, Article 29, Paragraph (3) hereof shall apply, *mutatis mutandis*.
- (2) A General Meeting of Shareholders may be held at the head office of the Company, Paju plant or at any other place as designated by the Board of Directors.
- (3) A notice for convening a General Meeting of Shareholders, which sets forth the time, date, place and agenda of the meeting, shall be sent to each shareholder, either in a written or an electronic form, at least two (2) weeks prior to the date of the meeting.
- (4) A notice to shareholders holding not more than one percent of the total number of issued and outstanding shares with voting rights may be replaced by public notices made two weeks prior to the General Meeting of Shareholders, either made at least twice in the "Maeil Business Newspaper" and "The Chosun Ilbo", both published in Seoul, or in the electronic disclosure system operated by the Financial Supervisory Service or the Korea Exchange. The public notice of a meeting shall include a statement that the General Meeting of Shareholders will be held and the venue, date and the agenda of such meeting.

Article 18. (Chairman of Meeting)

The Representative Director or a Director designated by the Representative Director shall serve as Chairman of the General Meeting of Shareholders. On the occurrence of a vacancy or absence of the Representative Director, Article 29, Paragraph (3) hereof shall apply, *mutatis mutandis*.

Article 18-2. (Maintenance of Order by the Chairman)

- (1) The chairman of a General Meeting of Shareholders may order persons who intentionally speak or behave obstructively or who disturb the proceedings of the meeting to stop a speech or to leave the place of the meeting.
- (2) The chairman of a General Meeting of Shareholders may restrict the time and number of speeches of a shareholder as deemed necessary for the purpose of efficient progress in the proceeding of the meeting.

Article 19. (Method of Resolution)

Except as otherwise provided in the applicable laws and the Articles of Incorporation of the Company, all resolutions of a General Meeting of Shareholders shall be adopted by the affirmative votes of the majority of shareholders present at the meeting; provided that, such votes shall represent at least one fourth (1/4) of total number of issued and outstanding shares of the Company.

Article 20. (Exercise of Voting Rights)

- (1) Each share shall have one (1) voting right.
- (2) A shareholder may exercise his/her vote through a proxy. In this case, the proxy holder shall file with the Company document evidencing authority to act as a proxy no later than the beginning of the General Meeting of Shareholders.
- (3) The Company shall not adopt the cumulative voting system provided under Article 382-2 of the Commercial Code.

Article 21. (Restrictions on the Exercise of Voting Rights by Cross Ownership)

If the Company, its parent company and subsidiaries, or any of its subsidiaries hold shares exceeding one-tenth (1/10) of the total number of issued shares of another company, such other company may not exercise any voting rights with respect to the shares of the Company which it holds.

Article 22. (Split Exercise of Votes)

- (1) A shareholder, holding two (2) or more votes, who wishes to split his/her votes, shall notify the Company to that effect and the reasons thereof by writing no later than the third day preceding the date set for the General Meeting of Shareholders.
- (2) The Company may refuse to allow the shareholder to split his/her votes unless the shareholder acquired the shares in trust or otherwise holds the shares for and on behalf of some other person.

Article 23. (Minutes of the Meeting)

The substance of the course of the proceedings of the General Meeting of Shareholders and the results thereof shall be recorded in the minutes and shall be kept at the head office and branches of the Company, after being affixed with the names and seal impressions or signatures of the chairman of the General Meeting of Shareholders as well as the Directors present.

Article 24. [Deleted]

CHAPTER IV. DIRECTORS AND BOARD OF DIRECTORS

Article 25. (General Authority)

Except as otherwise required by mandatory provisions of Korean law, the responsibility for the management, direction and control of the Company will be vested in the Board of Directors of the Company.

Article 26. (Number of Directors)

The Company shall have at least five (5) and up to seven (7) Directors, more than half of whom must be outside! Directors.

The term "Outside Director" used throughout the AOI has the meaning given by the Capital Market Act of Korea. The qualifications required of an "independent director" by the NYSE listing codes do not have to be set forth in word in the AOI, as long as a person(s) with such qualifications sits on the board.

Article 27. (Election of Directors)

- (1) Directors shall be elected at a General Meeting of Shareholders of the Company.
- (2) A resolution for the election of Directors shall be adopted by the affirmative votes of the majority of the shareholders present; provided, that, such votes shall represent at least one-fourths (1/4) of the total number of issued and outstanding shares.

Article 27-2. (Nomination of Candidates for Outside Directors)

- (1) The Company's Outside Director Nomination Committee shall recommend candidates for outside Directors, from those who are qualified under the Korean Commercial Code ("KCC") and other applicable provisions.
- (2) Any details concerning the nomination of candidates for outside Directors and deliberation on requirements of such candidates shall be determined by the Company's Outside Director Nomination Committee.

Article 28. (Terms of Directors)

Starting from the appointment, the term of office of Directors shall not exceed the close of the ordinary General Meeting of Shareholders that is convened for the period for the settlement of accounts for the third (3rd) year from the appointment.

Article 29. (Appointment of Representative Director and Duties)

- (1) The Representative Director of the Company shall be appointed by a resolution of the Board of Directors' meeting and the Representative Director shall represent the Company and manage all matters of the Company.
- (2) If two (2) or more Representative Directors are appointed, each shall represent the Company.

(3) On the occurrence of a vacancy or absence of the Representative Director, the person authorized in such order of priority as determined by the Regulations of the Board of Directors or the person separately determined by the Board of Directors shall perform his/her duties.

Article 30. (Meetings of the Board of Directors)

- (1) Meetings of the Board of Directors shall be convened by the Chairman of the Board of Directors or the person designated by the Regulation of the Board of Directors.
- (2) Meetings of the Board of Directors shall be convened no less frequently than on a quarterly basis. The persons entitled to convene a Meeting of the Board of Directors shall decide the meeting date and send a notice thereof to the Directors in writing, through electronic communication or orally at least twelve(12) hours prior to such meeting; provided that, when the consent of all the Directors has been obtained, a meeting of the Board of Directors may be held anytime without conforming to these procedures.
- (3) Meetings of the Board of Directors may be conducted in the English language and shall be translated into the Korean language by an interpreter, if necessary.
- (4) The Chairman of the Board of Directors shall be elected by the Board of Directors.
- (5) Meetings of the Board of Directors shall be held in Korea, unless otherwise determined by the Board of Directors.

Article 31. (Resolutions of the Board of Directors)

- The quorum for the Meeting of the Board of Directors of the Company shall require the presence of the majority of Directors in office.
- (2) Resolutions of a meeting of the Board of Directors shall be adopted by the affirmative votes of a majority of the Directors present.
- (3) The Board of Directors may allow all or part of the Directors in office to exercise his/her and/or their voting rights by telecommunication means through which they may transmit and receive voices at the same time without attending a meeting of the Board of Directors in person. In such case, the concerned Director(s) shall be deemed as having attended the meeting of the Board of Directors in person.

(4) Each member of the Board of Directors shall have one (1) voting right; provided, however, that any person who has special interests concerning a resolution of the Board of Directors may not exercise his/her voting right.

Article 32. (Filling of Vacancy)

- (1) Any vacancy in the office of Director shall be filled by resolution of a General Meeting of Shareholders; provided, however, that if the number of Directors required by Article 26 hereof is met and there is no difficulty in the administration of business, the vacancy may be left un-filled.
- (2) In case where the number of outside Directors required by Article 26 hereof is not met for reasons of resignation, death, etc., the vacancy should be filled at the first General Meeting of Shareholders to be convened after occurrence of such reason.

Article 33. (Minutes of the Board of Directors' Meeting)

- (1) The proceedings of a Board of Directors' meeting shall be recorded in the minutes.
- (2) The minutes shall set forth the agenda, the course of the proceedings and the results thereof, the opposing person(s) and the reasons for such opposition, and the chairman and all Directors present shall affix their names and seals or signatures to the minutes. The minutes shall be kept in the head office of the Company.

Article 34. (Committees)

- (1) The Company shall establish following committees within the Board of Directors.
 - 1. Audit Committee
 - 2. Outside Director Nomination Committee
 - 3. Other committees as deemed necessary by the Board of Directors

- (2) Details on composition, power and operation of each committee shall be determined by a resolution of the Board of Directors.
- (3) Articles 30 (2), 31 and 33 shall apply mutatis mutandis in respect of the foregoing committees.

Article 35. (Remuneration and Severance Pay of Directors)

- (1) The total amount of remuneration for the Directors shall be determined by a resolution of the General Meeting of Shareholders.
- (2) The severance pay for the Directors shall be made in accordance with the Regulations of Severance Payment to Directors as separately determined by a resolution of the General Meeting of Shareholders.

Article 36. [Deleted]

CHAPTER IV-II. AUDIT COMMITTEE

Article 36-2. (Composition of Audit Committee)

- (1) The Company shall have an Audit Committee in lieu of the statutory auditors in accordance with Article 34 hereof.
- (2) The Audit Committee shall consist of three (3) outside Directors.
- (3) When the shareholders appoint a member of the Audit Committee at a General Meeting of Shareholders, any shareholder who holds more than 3% of the total number of voting shares issued by the Company shall not exercise the voting rights of the shares in excess thereof.
- (4) The Audit Committee shall appoint, by its resolution, a person to represent the committee.

Article 36-3. (Duties of Audit Committee)

(1) The Audit Committee shall examine the accounts and businesses of the Company.

- (2) The Audit Committee may request the Board of Directors to convene an extraordinary General Meeting of Shareholders by submitting documents stating the agenda and reasons for such convocation.
- (3) The Audit Committee may request the Company's subsidiary to report the details of the operation, if deemed necessary for performance of its duties. In such a case, if the subsidiary fails to immediately report the details or if it is necessary to confirm the contents of the report, the Audit Committee may investigate the subsidiary's business operation and financial status.
- (4) The Audit Committee shall dispose any matters delegated by the Board of Directors, as provided in the Audit Committee Charter resolved by the Board of Directors, other than those set forth in Paragraphs (1) through (3) above.

Article 36-4. (Auditor's Records)

The Audit Committee shall prepare an auditor's record with respect to auditing and shall record the substance and results of the audit in the auditors' record, on which the names and seals or signatures of the members of the Audit Committee who have performed such audit shall be affixed.

CHAPTER V. ACCOUNTING

Article 37. (Fiscal Year)

The fiscal year of the Company shall commence on January 1 of each year and end on December 31 (of the same year).

Article 38. [Deleted]

Article 39. [Deleted]

Article 40. [Deleted]

Article 41. (Preparation and Maintenance of Financial Statements and Business Report)

- (1) The Representative Director shall prepare the following documents, supplementary documents thereto and the business report, and submit such documents to the Audit Committee for audit six (6) weeks prior to the day set for the ordinary General Meeting of Shareholders. The Representative Director, or if the Company has Joint Representative Directors, the Chief Executive Officer and Joint Representative Director, shall submit the following documents and the business report to the ordinary General Meeting of Shareholders for approval:
 - 1. Balance sheet;
 - 2. Profit and loss statement; and
 - 3. Other documents prescribed by the Enforcement Decree of the KCC that present the Company's financial position and business performance.
- (2) If the Company is required to prepare consolidated financial statements under the Enforcement Decree of the KCC, the documents under Paragraph (1) above shall include those prepared on a consolidated basis, respectively.
- (3) The Audit Committee shall submit the auditors' report to all Directors one (1) week prior to the day set for the ordinary General Meeting of Shareholders.
- (4) The Representative Director shall keep on file, from one (1) week before the day set for the ordinary General Meeting of Shareholders, the documents described in Paragraph (1) above and supplementary documents together with the business report and the auditors' report at the head office of the Company for five (5) years and certified copies of all of such documents at the branches of the Company for three (3) years.
- (5) The Representative Director shall give public notice of the balance sheet and the external auditor's opinion immediately after the documents referred to in Paragraph (1) above have been approved at the General Meeting of Shareholders.

Article 41-2. (Appointment of External Auditor)

The Company shall appoint an external auditor pursuant to the Act on External Audit of Stock Companies, Etc. and shall report such fact at the first ordinary General Meeting of Shareholders to be convened after the appointment or shall otherwise notify or publicly announce such fact to the shareholders as prescribed in the Enforcement Decree of the Act on External Audit of Stock Companies, Etc.

Article 42 (Appropriation of Earnings)

The Company shall dispose of the unappropriated retained earnings as of the end of each fiscal year as follows:

- 1. Legal reserve;
- 2. Other statutory reserves;
- 3. Dividends;
- 4. Discretionary reserve; and
- 5. Other appropriation of retained earnings.

Article 42-2. (Redemption of Shares)

- (1) The Company may redeem the shares of the Company within the limit of profit to be paid to its shareholders as dividends by a resolution of the Board of Directors.
- (2) In the case of the redemption of shares under the provision in Paragraph (1) above, the Board of Directors shall determine the following matters:
 - 1. Class and total number of shares subject to redemption;
 - 2. Total value of shares to be acquired for redemption; and
 - 3. Period during which the shares will be acquired. In any case, the period shall end before the date of the first ordinary General Meeting of Shareholders after the relevant resolution of the Board of Directors.
- (3) In the case where the Company acquires treasury shares for redemption under the provision in Paragraph (1) above, the acquisition shall be subject to the following standards:
 - 1. The Company shall follow the methods under the Article 165-2, Paragraph (2) of the Capital Market Act. If the acquisition is made in accordance with the method under Item 1 of the same provision, the acquisition period and the method thereof shall meet the standards set forth in the Presidential Decree under the Capital Market Act;

- 2. The amount of the acquisition for redemption shall not be more than the amount determined by the Presidential Decree under the Capital Market Act within the limit of distributable income under Article 462, Paragraph (1) of the Commercial Code at the end of the relevant fiscal year.
- (4) In the case where the Company redeemed its shares in accordance with the provision in Paragraph (1) above, the Company shall report the matters set forth in Paragraph (2) above and the purpose of the redemption at the first ordinary General Meeting of Shareholders after the relevant resolution of the Board of Directors.

Article 43. (Dividends)

- (1) Dividends may be paid in either cash or shares.
- (2) In case dividends are distributed in shares, if the Company has issued several classes of shares, such distribution may be made through shares of different classes by a resolution of a General Meeting of Shareholders.
- (3) Dividends in Paragraph (1) above shall be paid to the shareholders or pledgees registered in the shareholders registry of the Company as of the end of each fiscal year.

Article 43-2. (Interim Dividends)

- (1) The Company may pay interim dividends in accordance with Article 462-3 of the Commercial Code to its shareholders who are registered in the shareholder's registry as of 00:00 a.m. on July 1 of the relevant fiscal year. Such interim dividends shall be made in cash.
- (2) The interim dividends mentioned in Paragraph (1) above shall be decided by a resolution of the Board of Directors, which resolution shall be made within forty-five (45) days from the date mentioned in Paragraph (1) above.
- (3) The maximum amount to be paid as interim dividends shall be calculated by deducting the following amounts from the net asset amounts recorded in the balance sheet of the fiscal year immediately prior to the fiscal year concerned:
 - 1. Paid in capital of the company for the fiscal year immediately prior to the fiscal year concerned;

- 2. The aggregate amount of capital reserves and legal reserves which had been accumulated up until the fiscal year immediately prior to the fiscal year concerned;
- 3. The amount which was resolved to be distributed as dividends at an ordinary General Meeting of Shareholders of the fiscal year immediately prior to the fiscal year concerned;
- 4. Voluntary reserves which had been accumulated for specific purposes in accordance with the relevant provisions of the Articles of Incorporation or by resolution of the General Meetings of Shareholders until the fiscal year immediately prior to the fiscal year concerned;
- 5. Aggregate earned surplus reserves to be accumulated for the fiscal year concerned as a result of the interim dividends; and
- (4) If the Company has issued new shares (including those shares issued by way of conversion of reserves into capital stock, stock dividends, request of conversion of convertible bonds or exercise of warrants) prior to the date set forth in Paragraph (1) above, but after the commencement date of the fiscal year concerned, the new shares shall be deemed to have been issued at the end of the fiscal year immediately prior to the fiscal year concerned for the purpose of interim dividends.
- (5) When distributing interim dividends, the same dividend ratio as that of the common shares of the Company shall be applied to the preferred shares.

Article 44. (Prescription Period for Claim for Payment of Dividends)

- (1) The right to dividends shall be extinguished by prescription if the right is not exercised for five (5) years.
- (2) After the expiration of the prescription period set forth in Paragraph (1), unclaimed dividends shall revert to the Company.

ADDENDA

1. These Articles of Incorporation shall be effective from June 23, 2004, except for the Article 17, Paragraph (4), Article 41, Paragraph (2), Article 42-2, Article 43-2 which shall be effective upon the shares of the Company being listed on the Korea Exchange.

- 2. Notwithstanding Addudum 1. above, the Company shall satisfy the requirements under latter part of Article 26, Article 34 and Chapter IV-II of these amended Articles of Incorporation by the close of the first Annual (Ordinary) General Meeting of Shareholders to be convened after the amendment of these Articles of Incorporation. Until the composition of the Audit Committee under these amended Articles of Incorporation, the Company shall have at least one (1) statutory auditor and the current statutory auditor(s) of the Company shall have the same duty and rights as the statutory auditor(s) pursuant to the Commercial Code and the Articles of Incorporation prior to the amendment.
- 3. The outside Directors to be elected until the close of the first Annual (Ordinary) General Meeting of Shareholders to be convened after the amendment of these Articles of Incorporation, shall be deemed to have been nominated by the Outside Director Nomination and Corporate Governance Committee pursuant to Article 27-2; provided, however, that the outside Directors shall be nominated by the Outside Director Nomination and Corporate Governance Committee once such Committee has been composed of even before the close of such General Meeting of Shareholders.

ADDENDA (as of March 23, 2005)

These Articles of Incorporation shall be effective from March 23, 2005.

ADDENDA (as of February 28, 2007)

These Articles of Incorporation shall be effective from February 28, 2007.

ADDENDA (as of February 29, 2008)

These Articles of Incorporation shall be effective from March 3, 2008.

ADDENDA (as of March 13, 2009)

These Articles of Incorporation shall be effective from March 13, 2009.

ADDENDA (as of March 12, 2010)

These Articles of Incorporation shall be effective from March 12, 2010.

ADDENDA (as of March 11, 2011)

These Articles of Incorporation shall be effective from March 11, 2011.

ADDENDA (as of March 8, 2013)

These Articles of Incorporation shall be effective from March 8, 2013.

ADDENDA (as of March 15, 2019)

These Articles of Incorporation shall be effective from March 15, 2019, except for the amended provisions of Article 8, Article 13, Article 14, Article 15-4 and Article 15-5, which shall be effective from the date the Act on Electronic Registration of Stocks, Bonds, Etc. takes effect.

I, Sang Beom Han, certify that:

- 1. I have reviewed this annual report on Form 20-F of LG Display Co., Ltd.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
- 4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
- 5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 30, 2019

/s/ SANG BEOM HAN

Sang Beom Han

Representative Director, Vice Chairman and
Chief Executive Officer

I, Donghee Suh, certify that:

- 1. I have reviewed this annual report on Form 20-F of LG Display Co., Ltd.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
- 4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
- 5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 30, 2019

/s/ DONGHEE SUH

Donghee Suh
Senior Vice President and
Chief Financial Officer

Certification

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsection (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsection (a) and (b) of section 1350, chapter 63 of title 18, United States Code), the undersigned officer of LG Display Co., Ltd., a corporation organized under the laws of the Republic of Korea (the "Company"), does hereby certify, to such officer's knowledge, that:

The annual report on Form 20-F for the year ended December 31, 2018 (the "Form 20-F") fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Form 20-F fairly presents, in all material respects, the financial condition and results of operation of the Company.

Date: April 30, 2019

/s/ SANG BEOM HAN

Sang Beom Han Representative Director, Vice Chairman and Chief Executive Officer

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to LG Display Co., Ltd. and will be retained by LG Display Co., Ltd. and furnished to the Securities and Exchange Commission or its staff upon request.

Certification

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsection (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsection (a) and (b) of section 1350, chapter 63 of title 18, United States Code), the undersigned officer of LG Display Co., Ltd., a corporation organized under the laws of the Republic of Korea (the "Company"), does hereby certify, to such officer's knowledge, that:

The annual report on Form 20-F for the year ended December 31, 2018 (the "Form 20-F") fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Form 20-F fairly presents, in all material respects, the financial condition and results of operation of the Company.

Date: April 30, 2019

/s/ DONGHEE SUH

Donghee Suh
Senior Vice President and
Chief Financial Officer

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to LG Display Co., Ltd. and will be retained by LG Display Co., Ltd. and furnished to the Securities and Exchange Commission or its staff upon request.