

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. 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. 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.

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, decreased by 13.6% from ₩667,726 in 2017 to ₩576,817 in 2018, which was largely driven by an increase in the supply capacity of global display panel manufacturers that applied downward pricing pressure, but increased by 5.9% to ₩610,716 (US\$529) in 2019, which primarily reflected a depreciation of the Korean Won against the U.S. dollar during 2019 as well as our ongoing efforts to increase in our product mix the proportion of OLED panels (including OLED television panels and plastic OLED panels), which generally have higher selling prices than TFT-LCD panels, in light of the continued overcapacity in the global TFT-LCD market and further capital investments by other suppliers, particularly from China, as well as in response to an increase in market demand for OLED products.

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 cannot provide any assurance that an increase in demand, which helped to mitigate the impact of industry-wide overcapacity in the past, will recur in the near future or 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, especially in light of the ongoing global pandemic of a new strain of coronavirus referred to as “COVID-19,” which is likely to have a significant negative effect on the global economy. See “Risks Relating to Our Company—Earthquakes, tsunamis, floods, severe health epidemics (including the ongoing global COVID-19 pandemic and any possible recurrence of other types of widespread infectious diseases) and other natural calamities could materially adversely affect our business, results of operations or financial condition.” 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, any significant disruptions in our supply chain and global economic conditions in general. For example, as part of our continued efforts to increase the proportion of higher-margin OLED panels in our product mix, we have been reducing the production level of less profitable types of TFT-LCD panels in recent years, and in January 2020, we announced our plans to cease the production of TFT-LCD television display panels in Korea by the end of 2020 in light of continued overcapacity in the market and our increased focus on producing OLED panels. 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, "Cinematic Sound OLED" sound integrated panels, rollable OLED display panels and transparent 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 TFT 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, automotive products and 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 our OLED technology, 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 to 36 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/or 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 2017, 2018 and 2019.

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, we plan to finalize our preparations for the commencement of operation at our CO fabrication facility, located in Guangzhou, China, within the first half of 2020, while the expected timing for commencing mass production of large-sized OLED panels at such facility remains subject to the state of the ongoing global COVID-19 pandemic, among other factors. In addition to introducing large-sized 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 (which has since been integrated into our AP3 fabrication facility to be collectively referred to as "AP3") and E6 production line (which has since been integrated into our AP4 fabrication facility to be collectively referred to as "AP4") in August 2017 and July 2019, respectively.

With the addition of "8K" 88-inch OLED televisions to the line-up of available products in 2019, following the prior launch of 55-inch, 65-inch and 77-inch OLED televisions, we are continuing to deploy 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 (especially automotive products) 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 42.2%, 40.0% and 34.1% of our total revenue in 2017, 2018 and 2019, 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 8.1%, 11.7% and 11.9% of our total revenue in 2017, 2018 and 2019, respectively, those who use our panels in their desktop monitors, which accounted for 15.8%, 16.6% and 17.2% of our total revenue in 2017, 2018 and 2019, respectively, those who use our panels in their tablet computers, which accounted for 8.5%, 8.2% and 9.6% of our total revenue in 2017, 2018 and 2019, respectively, and those who use our panels in their mobile and other applications, which accounted for 25.3%, 23.4% and 27.2% of our total revenue in 2017, 2018 and 2019, respectively. Although the degree to which our total sales are dependent on sales of television panels has declined 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.

Earthquakes, tsunamis, floods, severe health epidemics (including the ongoing global COVID-19 pandemic and any possible recurrence of other types of widespread infectious diseases) and other natural calamities could materially adversely affect our business, results of operations or financial condition.

If earthquakes, tsunamis, floods, severe health epidemics 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 historically suffered natural calamities from time to time, such as China, Japan and Taiwan, as well as Korea. Any occurrence of such natural calamities in 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 China, the United States, Europe, Korea and Japan, may cause disruptions in their businesses, which in turn could adversely impact their demand for our products.

In particular, COVID-19, an infectious disease caused by severe acute respiratory syndrome coronavirus 2 that is known to have been first transmitted to humans in November 2019 and has spread globally, has materially and adversely affected the global economy and financial markets in recent months as well as disrupted our business operations, including temporary suspension of operations at certain of our manufacturing facilities. See “–If we cannot maintain high capacity utilization rates, our profitability will be adversely affected.” The World Health Organization declared the COVID-19 as a pandemic in March 2020.

Risks associated with a prolonged outbreak of COVID-19 or other types of widespread infectious diseases include:

- an increase in unemployment among, and/or decrease in disposable income of, consumers who purchase the products manufactured by our end-brand customers and a decline in overall consumer confidence and spending levels, which in turn may decrease demand for our products;
- disruption in the normal operations of the businesses of our customers, which in turn may decrease demand for our products;
- disruption in the supply of raw materials, components and equipment from our vendors;
- disruption in the delivery of our products to our customers;
- disruption in the normal operations of our business resulting from contraction of COVID-19 by our employees, which may necessitate our employees to be quarantined and/or our manufacturing facilities or offices to be temporarily shut down;
- disruption resulting from the necessity for social distancing, including implementation of temporary adjustment of work arrangements requiring employees to work remotely and restriction on overseas and domestic business travel, which may lead to a reduction in labor productivity;
- depreciation of the Won against major foreign currencies, which in turn may increase the cost of imported raw materials, components and equipment;
- unstable global and Korean financial markets, which may adversely affect our ability to meet our funding needs on a timely and cost-effective basis; and
- decreases in the fair value of our investments in companies that may be adversely affected by the pandemic.

It is not possible to predict the duration or full magnitude of harm from COVID-19. In the event that COVID-19 or other types of widespread infectious diseases cannot be effectively and timely contained, our business, financial condition and results of operations may be materially adversely affected.

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 at our OP1 fabrication facility since 2013, and OLED panels for smartphones at our AP2 fabrication facility since 2013. We also began production of plastic OLED panels at our AP3 and AP4 fabrication facilities in August 2017 and July 2019, respectively, in each case for mobile and other applications. Furthermore, we plan to finalize our preparations for the commencement of operation at our CO fabrication facility within the first half of 2020, while the expected timing for commencing mass production of large-sized OLED panels at such facility remains subject to the state of the ongoing global COVID-19 pandemic, among other factors.

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 the Display of the Year Award for our 65-inch Wallpaper OLED television panels and our Ultra HD Cinematic Sound OLED technology in May 2017 and May 2018, respectively. In addition, our 65-inch rollable OLED television panels received multiple awards at the 2019 Consumer Electronics Show in January 2019 as well as the Presidential Award at the 2019 Korea Tech 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 technologies to OLED technology, 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 fabrication facility to manufacture next generation large-sized OLED panels, which was established under the name of LG Display High-Tech (China) Co., Ltd., in July 2018. We currently hold a 75% ownership interest in the joint venture and the government of Guangzhou holds the remaining 25% ownership interest. We have invested approximately ₩5.0 trillion in capital expenditures for the joint venture, and we plan to finalize our preparations for the commencement of operation at the new CO fabrication facility within the first half of 2020, while the expected timing for commencing mass production of large-sized OLED panels at such facility remains subject to the state of the ongoing global COVID-19 pandemic, among other factors.
- In July 2017, we announced plans to make investments in an aggregate amount of up to ₩7.8 trillion in new large-size OLED and plastic production lines in Paju, Korea, including our new AP4 fabrication facility, which commenced mass production of plastic OLED panels in July 2019. In July 2019, we announced plans to make additional investments of ₩3.0 trillion in the previously announced new large-size OLED production lines. We are in the process of developing and assessing the specifics of such planned investments, including the timing.

In 2019, our total capital expenditure on a cash out basis amounted to ₩6.9 trillion. We currently expect that, in 2020, our total capital expenditures on a cash out basis will be lower compared to 2019 and will be used primarily to continue to fund our previously announced investments related to facilities for OLED panels. Such expected capital expenditures are subject to periodic assessment, and we cannot provide any assurance that such expected capital expenditures 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 (including those in relation to the ongoing global COVID-19 pandemic), 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 (which has since been integrated into and combined with our AP3 fabrication facility) and AP4 fabrication facility and commenced mass production of plastic OLED panels for mobile and other applications in August 2017 and July 2019, respectively. 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 TFT-LCD panels at our CA 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 majority ownership interest in, a joint venture with the government of Guangzhou to construct a fabrication facility to manufacture next generation large-sized OLED panels in Guangzhou, China. We have invested approximately ₩5.0 trillion in capital expenditures for the joint venture, and we plan to finalize our preparations for the commencement of operation at the new CO fabrication facility within the first half of 2020, while the expected timing for commencing mass production of large-sized OLED panels at such facility remains subject to the state of the ongoing global COVID-19 pandemic, among other factors. 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, overcapacity in the display industry or a significant disruption in the supply chain of raw materials, equipment and labor, we may need to reduce or delay the production of our products, resulting in lower-than-optimal capacity utilization rates. For example, we expect that the ongoing global COVID-19 pandemic will likely have an adverse effect on the demand for our products. In addition, as a result of the pandemic, we have experienced minor temporary suspensions in production at certain of our manufacturing facilities, and we may experience further disruptions in our production or supply chain in the future if the pandemic continues for a prolonged period of time. See “Earthquakes, tsunamis, floods, severe health epidemics (including the ongoing global COVID-19 pandemic and any possible recurrence of other types of widespread infectious diseases) and other natural calamities could materially adversely affect our business, results of operations or financial condition.” 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, our dependence on a limited number of suppliers or temporary disruptions in the supply chain thereof due to factors outside of our control (such as the ongoing global COVID-19 pandemic). 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.

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 cyclical nature 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.

Unfavorable outcomes in investigations and proceedings against us and other TFT-LCD panel producers for possible anti-competitive activities may have a direct and indirect material impact on our operations.

Since 2006, we and certain other TFT-LCD panel producers have been subject to an investigation by the U.S. Department of Justice, various and separate claims brought by direct and indirect purchasers, and a number of legal proceedings brought by attorneys general of various states in the United States, with respect to possible anti-competitive activities in the TFT-LCD industry. We have since settled and resolved the investigation and various subsequent legal proceedings, with the exception of the attorney general of the Commonwealth of Puerto Rico. The 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 21, 2020, we have not been served with the complaint from the attorney general of the Commonwealth of Puerto Rico.

We have also been subject to investigations outside of the United States, including by the European Commission, with respect to the same subject matter. We have since settled, resolved, and/or paid fines for such actual investigations brought by the relevant competition authorities. Following the European Commission's decision, various follow-on claims were initiated in the United Kingdom by various claimants alleging damages as a result of violation of European competition laws. We have since reached settlements with each of the claimants, with the exception of a follow-on damages claim filed by Granville Technology Group and others ("Granville") in the U.K. in December 2016. As of April 21, 2020, we are vigorously defending ourselves against claims by Granville.

In addition, 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. As of April 21, 2020, we have not been served with the complaint from Hatzlacha.

See "Item 8.A. Consolidated Statements and Other Financial Information—Legal Proceedings—Antitrust and Others" for a more detailed description of these matters as well as other legal proceedings that we are involved in.

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 ongoing proceedings that we are involved in, 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, 2019, we did not recognize 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, 2019 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, 2019, ₩400 billion (US\$353 million) of our outstanding short-term borrowings, ₩3,197 billion (US\$2,767 million) of our outstanding long-term borrowings (including current portions thereof) and ₩116 billion (US\$100 million) of our outstanding bonds were indexed to LIBOR.

In July 2017, the Financial Conduct Authority of the United Kingdom ("FCA"), which has regulatory authority with respect to LIBOR, announced that it does not intend to continue to encourage, or use its power to compel, panel banks to provide rate submissions for the determination of LIBOR beyond the end of 2021. It is possible that panel banks will continue to provide rate submissions, and that the ICE Benchmark Administration as the independent administrator of LIBOR will continue to determine and announce LIBOR, on the current basis after 2021, if they are willing and able to do so. However, there is no guarantee that LIBOR will be determined and announced after 2021 on the current basis, or at all.

Currently, it is not possible to predict future developments with respect to LIBOR or their timing or impact. Any such developments, including as a result of international, national or other initiatives for reform or the adoption of successor or alternative benchmark reference rates in the international debt capital markets, 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 short-term and long-term borrowings and bonds 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, between the Korean Won and the Chinese Yuan 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 U.S. dollars and Chinese Yuan. Accordingly, fluctuations in exchange rates, in particular between the U.S. dollar and the Korean Won, between the Chinese Yuan 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, Chinese Yuan 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 Chinese Yuan or Japanese Yen increases the Korean Won cost of our Chinese Yuan- or Japanese Yen-denominated purchases of equipment, raw materials or components, as applicable, and, to the extent we have any debt denominated in Chinese Yuan or 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 Chinese Yuan or 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.

In April 2019, Solas OLED Ltd. filed complaints against us and certain television set manufacturers in the United States and Germany alleging patent infringement by the defendants. In each of these cases, the amount being sought has not been determined. A court hearing for the case in Germany and a pre-trial hearing for the case in the United States have been scheduled for May 2020. As of December 31, 2019, we have not recognized any provisions with respect to such 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, 2019 and may have an adverse effect on our operating results or financial condition.

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, 2019, 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 2017, we and certain of our employees have received and paid aggregate fines of approximately ₩34 million and are currently undergoing proceedings relating to fines of ₩6 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. We have also implemented certain measures to facilitate future compliance with such regulations. 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 or convertible securities 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 other securities that may be converted into shares of our common stock or the availability of such shares or securities 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 or other securities that may be converted into 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 largest 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 21, 2020. 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 depository 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, 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 depository, 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 depository, 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 depository 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 depository refuses to do so on their behalf. Our deposit agreement does not require the depository 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 depository in Korean Won and then converted by the depository 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 depository 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 ongoing trade disputes with Japan);
- adverse conditions or developments 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, including as a result of deteriorating economic and trade relations between the United States and China and increased uncertainties resulting from the United Kingdom’s exit from the European Union;
- the occurrence of severe health epidemics in Korea and other parts of the world (such as the ongoing global outbreak of COVID-19, which has been characterized as a pandemic by The World Health Organization);
- 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 Yuan), 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 small- and 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;
- 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 (including a potential escalation of hostilities between the U.S. and Iran) and Northern 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 and warheads that can be mounted on ballistic missiles. Over the years, North Korea has continued to conduct missile tests, including ballistic 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.